NEW REMEDIES.

AN ILLUSTRATED MONTHLY TRADE JOURNAL OF MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

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NEW REMEDIES is issued regularly on the middle of each month, dated for the month ahead. All changes of advertisements should reach us before the 5th, and *no new advertisement can be inserted after the 12th.*

Electrotypes of the illustrations contained in NEW REMEDIES *will be furnished for 50c. per square inch.*

EDITORIAL.

THROUGH the efforts of Professor P. W. Bedford, who is well-known to all pharmacists of this section, seconded by a considerable number of representative druggists, the effort to establish an organization of the pharmacists and druggists in this State bids fair to be in every way successful, and we anticipate that the gathering, to take place in Utica on the 21st and 22d of May, will be so general and spontaneous that a satisfactory start will be secured. The choice of Utica as the place for meeting seems to have met the approval of nearly all persons chiefly interested, and the citizens of Utica have already manifested a desire to aid the project to the extent of their ability. The rooms of the Common Council have been placed at the disposal of the convention, and the proprietor of the leading hotel has offered favorable terms to those who will become his guests on this occasion. A large number of druggists, residing in every part of the State have already indicated their willingness to be present, and Professor Bedford is constantly in receipt of letters of approval and expressions of hearty interest in the project. It is the intention of Professor Bedford to accompany his circular with information respecting the timetables and rates of fare of all the direct routes leading to the place of meeting.

The circular letter accompanying the call for the convention contains the following items of interest to those chiefly concerned.

Object of the Association.—The advancement of pharmaceutical knowledge; the elevation of professional character of apothecaries and druggists; the discussion of any topics of science or trade which may benefit the members, and the promotion of social feeling among those in our fraternity, in this State.

Membership.—Any adult person, of good moral and professional standing, residing or doing business in this State, who has been engaged three years or more in a store where drugs or medicines are dispensed, all graduates of colleges of pharmacy, licentiates of boards of pharmacy, teachers and professors of botany, materia medica, chemistry, pharmacy and such sciences as are collateral with our profession, manufacturing chemists, wholesale druggists, whether in business for themselves or employed by another, are invited to join in the organization of this association.

Accommodations.—Arrangements have been made with C. Allan Linsley, of the Butterfield House, that all persons in attendance at this meeting shall have the best accommodations of this well-known hotel, at the rate of two dollars per day, during their stay. As the accommodations at the hotel for our comfort need to be proportioned to the number who will attend, it is very desirable that all who anticipate attending the meeting should, at an early day, notify the undersigned* of their intention of being present.

Business.—Those who desire to present any business or papers for action at the meeting would confer a very great favor by forwarding to the undersigned such information as will tend to have them properly placed before the meeting, and avoid unnecessary delay or loss of time.

Exhibit.—Those who desire to bring any specimens of rare, curious, or interesting articles, that may be appropriate for such an occasion, should send due notice, in order that arrangements may be made for their display. It is not intended that there shall be any regular exhibit or large displays of manufactured products, but new inventions, apparatus, novelties, specimens of rare drugs and chemicals, to a limited extent, are desirable. None will be provided for, except by previous correspondence.

Ladies.—The undersigned is pleased to know that several of the members intend bringing their wives with them. Special arrangements will be made for the pleasure and entertainment of the ladies who may accompany the members, and it is hoped that many more of those intending to be present will notify the undersigned *that they will not come alone.* The varied attractions of Utica and its vicinity will be of interest and pleasure to the ladies.

Excursion.—On Friday, it is proposed that those who can remain over, will spend a part of the day at Trenton Falls, 16 miles distant, by rail from Utica, one of the most beautiful, natural attractions of the State.

CORRECTION.—In our notice of Whitfield's capsule-filling and capping machine, we mentioned that it was adapted to be used with Planten's capsules, wherein we were wrong. The sizes at present for sale fit the capsules made by Parke, Davis & Co., of Detroit, who are likewise the agents for the inventor.

*[P. W. Bedford, P. O. Box 1738 N. Y. City.]

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

Pituri and Duboisia.*

PITURI is the substance chewed by the natives of some parts of Central Australia as a stimulant narcotic. It is mentioned in the writings of Australian explorers and is spelled "bedgery, pedgery, picherie, pecherie, pitury, and otherwise." According to Mr. Howitt, the best way of rendering the native pronunciation of the Cooper's Creek dialect is "pitchery."

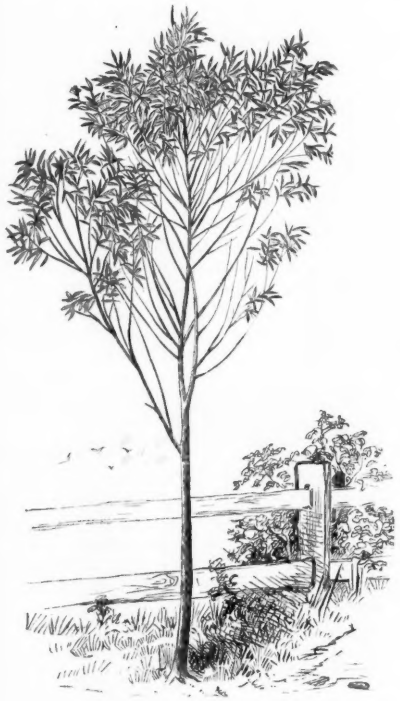
Previous to the year 1862, this substance appears to have been unknown to natives south of the drainage line of Cooper's Creek, which trends SW. from its sources in the dividing ranges of Queensland (lat. 23°, long. 145°, about) to its terminal expansion and desiccation in S. Australia (lat. 30°, long. 137°, about). It is probable that its use formerly extended south of this boundary, and that it receded before the white man's tobacco, now the chief luxury and current coin amongst the blacks of the out-settlements. Pituri, or pitchery, was in 1862 so scarce among the Cooper's Creek tribes that they parted with only small quantities in barter for wax matches, which latter represented "golden" currency. The men carried it in small skin bags tied round their necks, or under the axillæ.

Duboisia Hopwoodii.—Flowering branch.

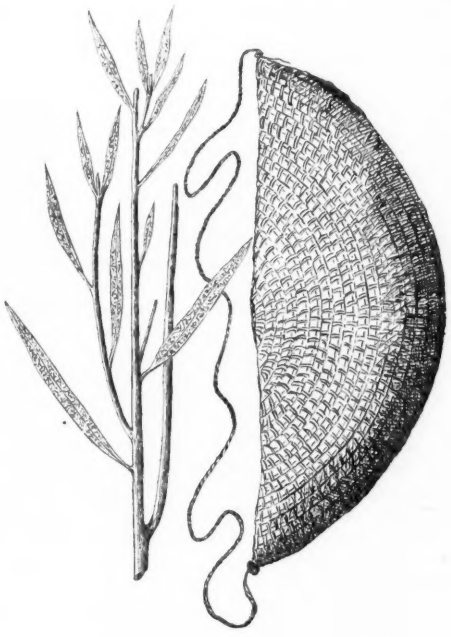
Dr. Bancroft, of Brisbane, states that, in February, 1872, he obtained from Mr. Gilmour a quantity of dried leaves and some particulars of a plant used by the natives as a stimulating narcotic. These leaves (called "pituri") were obtained in the neighborhood of the waterhole Kulloo, eight miles beyond Eyre's Creek. The

* From a paper on Pituri in the *Lancet* and in *Pharm. Journ.*, Feb. 1st, 1879; from a paper on Pituri and Duboisia, by Dr. Jos. Bancroft, read before the Queensland Philosoph. Soc., Oct. 25th, 1877; and from a communication received from Mr. Thos. Christy, F.L.S., of London.

use of the pituri, according to Mr. Gilmour, is confined to the old men of a tribe called Malutha, all the males of which tribe are circumcised. This pituri is carried in neatly-made oval pointed bags, specimens of which Mr. Gilmour brought (see figure, which represents the bag half-size, and appears to be made, not of skin, but of basket work). They never travel without it on their long marches, using it constantly to deaden the cravings of hunger and to support themselves under excessive fatigue. It appears to serve them for the same purposes as Coca does the natives of South America.



Duboisia Hopwoodii. F. v. Muell.



Pituri and Basket as obtained from Natives.

In February, 1877, Dr. Bancroft learned that Mr. W. O. Hodgkinson had recently arrived from exploring the north-west border, and had brought with him some pituri. These specimens were furnished to Dr. Bancroft, and by him transmitted to Baron von Mueller, of Melbourne, who made the following reply:

"I am glad that at last the doubts concerning the origin of the pituri poison seemed solved. The specimens, though without flowers and fruits, appear certainly referable to my *Duboisia Hopwoodii* (Frag. Phytograph. vol. x., p. 20), formerly, when fruit was unknown, referred to *Anthocercis*. It comes not quite unexpectedly that the pituri is traced to Duboisia, because I am aware of the poisonous properties of several species of *Anthocercis*, and this added to my reasons to restore both *Duboisia* and *Anthocercis* to Solanaceæ from which Bentham had wrongly removed them to Scrophularinæ. Now an interesting field opens to Dr. Bancroft for further research. Let the doctor try the foliage of *Duboisia myoporoides*,* as he could easily, for a little payment, get a black fellow to administer small doses of that plant to. There could be no danger in the experiment if the quantity is given cautiously. I fancy that the properties of the *Duboisias* will prove similar to those of *Stramonium*."

Dr. Bancroft tried the effects of pituri upon animals and found it to produce the following effects: 1st. Period of preliminary excitement from apparent loss of inhibitory power of the cerebrum, attended with rapid respiration; in cats and dogs, with vomiting and profuse secretion of saliva. In dogs there is retraction of the eyeball. 2d. Irregular muscular action, followed by general convulsion. 3d. Paralysis of respiratory function of medulla. 4th. Death, or 5th. Sighing inspirations at long intervals. 6th. Rapid respiration and returning consciousness. 7th. Normal respiration and general torpidity not unattended with danger to life.

Mr. Staiger, analytical chemist at the Queens-

* In reference to this compare our volume for 1878, p. 229.

land Museum, examined pituri and found it to contain an active principle of great potency. It looks like a brown oil, without tendency to crystallize, is miscible with water, and causes death, as in tetanus, by excessive contraction of the respiratory muscles and suffocation.

Mr. Jas. P. Murray, late surgeon to the Victoria Contingent Search Expedition into Central Australia, states that pituri plays an important part in the social rites of the natives. He says:

"At their 'big talks' and feasts, the pitchiri 'quid'—for I can find no more appropriate word for it—is ceremoniously passed from mouth to mouth, each member of the tribe having a chew, from the pin'aroo, or head man, downwards. This singular wassail cup never fails to promote mirth and good fellowship, or to loosen the tongues of the eloquent. I have not been able to ascertain if the excitement it produces can be pushed to actual intoxication, or whether natives suffer from its use. There is a curious mode of greeting on Cooper's Creek. When friends meet they salute with 'gaou, gaou,' ('peace, peace'), and forthwith exchange pitchiri 'quids,' which when well chewed are returned to their owner's ears! They extended this custom to us, but the fullest appreciation of their hospitality in offering their highly prized and indeed only stimulant could never overcome our repugnance to the nauseous morsels hot and steaming from their mouths. I may add they always accepted our want of politeness good-humoredly. The 'quid' which I have spoken of, which is carried behind the ear, is composed of pure pitchiri, green leaves, and wood-ashes. The pure pitchiri I saw resembled unmanufactured tobacco of a very coarse kind, dried and pulverized. It had the same brownish color, but the stalks and midribs, which were strong, preponderated over the finer parts of the leaf. I could never obtain an unbroken leaf, nor even a good piece of one as a specimen. It had no particular smell, but a more pungent taste, which to me appeared like tobacco, and chewing it promoted a copious flow of saliva. The natives take a good pinch of pitchiri, and knead it with green leaves, I think to increase the size of the masticatory and moderate its power."

Mr. Thos. Christy, F.L.S., of London, has favored us with a communication, giving some new details about pituri and its constituents, from which we abstract the following:

Last year Dr. Ringer having received a small quantity of pituri, sent it to Mr. Gerrard that he might submit it to a chemical analysis. Mr. Gerrard found that the pituri contained an alkaloid, and though he had but a small quantity, he was able to determine part of its properties, and he called it piturine.

A small quantity of pituri, about 50 grams, were sent to Mr. E. Petit, of Paris, who continued the experiments of Mr. Gerrard. Mr. Petit treated the watery extract by potassium carbonate and exhausted it with ether. The latter took up an alkaline matter, which was removed by shaking the ethereal solution with water acidulated with sulphuric acid. The process had to be several times repeated, to exhaust the watery extract. From the watery solution of the sulphate the alkaloid is again removed by adding potassium carbonate and shaking with ether. Finally on evaporating the ethereal solution a liquid residue is left, which exhibits strong alkaloidal properties, has an irritating smell, and stings the tongue on being brought in contact with it. It was found to be *volatile*, and to emit fumes, when a rod moistened with hydrochloric acid was placed over it. Mr. Petit suspected, therefore, that it might be identical with nicotine. This view received apparently further confirmation in his hands from an examination of the rotary power of the alkaloid, and from an examination of the chloroplatinate. The latter was exactly identical in crystalline shape with that of nicotine, and its percentage of platinum and chlorine, being found to be respectively 34.4% and 37%, corresponds practically to the theoretical percentages *required*, namely 34% and 36%. The other reactions are also the same.

The alkaloid prepared by Mr. Gerrard has been tried in London by two learned physiologists, Messrs. Sidney Ringer and William Murrell.

The phenomena noticed by them are exactly the same as those mentioned by Claude Bernard, in his lecture on nicotine.*

Increase of respirations, which become painful and diaphragmatic, staggering walk, contractions, convulsions of muscles, stiffness of limbs, all this will be found described therein. A curious thing, and which has been noticed by the three observers, is this, that the animal seems blind and the ocular globe seems turned over, as the pupil cannot be seen, but upon closer examining, Claude Bernard discovered, before Drs. Ringer and Murrell, that this was brought on by the tension of the third or inner eyelid (the nicti tating membrane), which hid the pupil. The alkaloid of pituri appears, therefore, to be identical with, or at least similar to nicotine.†

To make Fabrics Impervious to Water.—M. Von Mollman, of Paris, is said to have recently patented a process for rendering any woven fabric impermeable to water without affecting its color or impeding the free passage of the air. The process consists in immersing the cloth in a bath composed of water, acetate of alumina, and Iceland moss. The latter article is first boiled in the water and the acetate of alumina afterward added. The fabric is allowed to remain in the solution two or three hours and then taken out and dried.

* Claude Bernard, Leçons sur les substances toxiques et médicamenteuses.

† It is very probable that a difference between nicotine from tobacco and the alkaloid of pituri will be demonstrated at some future time.—Ed. N. R.

NOTES ON PRACTICAL CRYSTALLIZATION.

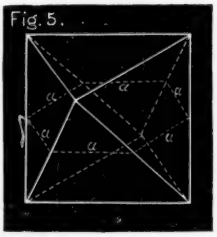
BY J. U. LLOYD.

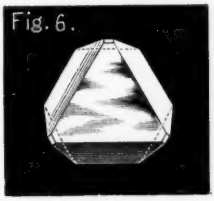
(Continued.)

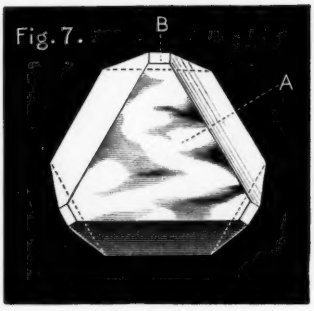
THE growth of the crystal is as essentially the study of nature as the cultivation of plants, where the conditions of temperature and various other influences favorable to one species may result in complete failure if applied to another, even of the same natural order.

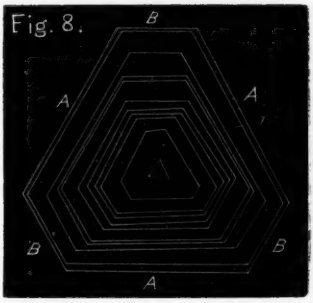
Perhaps the most discouraging feature connected with experimental crystallization is the tendency of solutions to dissolve a crystal in process of construction, or to deposit upon it other crystals, thus destroying the perfection of the one being investigated. The occurrence of either phenomenon is in all cases dependent upon Nature's laws which the experimenter neglects to observe or does not understand. We must avoid such carelessness if the former is applicable. If the latter, the conditions favorable to the growth of the crystal must be learned, and judicious observation of the substance while crystallizing will usually accomplish this end. For the preparation of distinct crystals, such authorities as I have the opportunity to search direct us to await the slow deposition of material from a spontaneously evaporating solution, which is very tedious indeed, and in my experience often as unsatisfactory as tedious.

In the April number of NEW REMEDIES, figure 3 represented a conglomerate of crystals obtained under the conditions named in the experiment. It was also mentioned that along the sloping sides of the basin isolated crystals would be found. These latter we have to do with now. When placed in a natural position, they are represented by the adjoining Figure 4. Some may be much smaller, a few somewhat larger, but all which are formed under natural influences, when placed in original position, will be represented by the cut, excepting that upon close examination the upper face, apparently a triangle, will be found to have the corners clipped, thus being actually bounded by six edges, three dominant. It will also be found that each of the other dominant faces which form the sides of the crystal is likewise cut by small square faces perpendicular to one axis of the crystal and parallel to the other two, as plainly shown by Figure 7, B. Thus our crystal proves to be a *combination* of the regular octohedron and the cube, the octohedral form predominating, and exemplified by Figures 6 and 7. This principle









may be shown by clipping the corners of the regular octohedron, Fig. 2 (see April number), by planes perpendicular to the axes, when it will be seen that the original faces will not inclose a solid figure, but in connection with the six small four-sided faces will make a complex crystal, the dominant form being octohedral. We will also see that the small natural crystals we have obtained are each the upper half of such a figure, when bisected by a plane parallel to the horizontal faces and resting on the cut surface which is a regular hexahedron, Fig. 5, A, thus throwing the face (see Fig. 7, A) of the original figure upward.

To Continue the Growth.—Prepare the stone jar and tub as directed in the preceding article, then line the entire inner surface of the jar

with a layer of cotton, three or four inches in depth being placed upon the bottom. To the solution decanted from the crop of crystals made in our last experiment, add ammonio-ferric alum and stir until the solution is saturated at a temperature of 60° F. Then pour the supernatant liquid into the evaporating dish and cautiously increase the temperature until it reaches 65° F., then place the dish containing the solution inside the nest of cotton and place the crystals to be grown (the small isolated crystals of the former experiment) in natural position upon the bottom of the dish, allowing considerable space to intervene between them. Surround the jar at once with ice and cover the arrangement with a non-conductor, as directed in the first paper, and allow it to remain in a quiet position fifteen or eighteen hours, when the liquid must be at once decanted. Each crystal will be found to have increased in size, Fig. 6 being drawn from the original of Fig. 4, after such an increase. The operation may be repeated, Figure 7 representing a deposit of fifteen hours' duration upon the original of Figure 6. Thus each additional operation will increase the size of the crystal; one before me as I write, with scarcely a disfigurement, weighing ten ounces, having been made in a quart evaporting basin. It will be found, as the crystals increase in size, that the solution may be saturated at higher temperature. Care must be taken, however, that, if it is cold, the crystal be warmed to the temperature of the liquid, otherwise upon immersion in the solution there may be a deposition of small crystals over the entire surface.

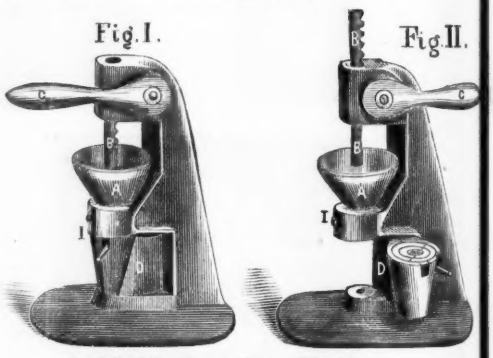
It is essential that the crystal be removed from the liquid before the ice which surrounds the jar has melted, otherwise, the solution will dissolve a portion of the crystal proportionate to the increase of temperature, thus obliterating the angles. However, if by accident this occur, and the crystal becomes ever so unsightly, Nature will remedy the defect in a short time if permitted and perhaps by the growth of a few hours restore a badly defaced crystal to its original beauty.

The growth of different portions of a crystal is not necessarily regular. Various influences modify the deposition of matter upon particular parts of all crystals, and thus hasten or retard certain faces or portions of a face. For example, the square faces of the figures heretofore represented are much smaller compared to the hexahedral than is often the case. Frequently one square face of a crystal will be quite large, while of the same crystal the others are small, and this is also true of the hexahedral faces. The causes for these variations are generally easily understood if the phenomena of growing crystals are carefully attended, and by due observance of Nature's laws it is possible to grow the crystal in desired directions at will, certainly the most enticing part of the study being this cultivation of distorted crystals.

In all the preceding figures of crystals we have represented them as though we were looking down upon their tops. Figure 8 represents the exact size of the upper face of a crystal taken at eleven different stages of its growth, each face being bounded by one of the encircling lines. It will be noticed that occasionally the growth is greatest upon the fundamental form of the crystal as represented by a lengthening of the lines A which form the edges of two meeting hexahedral faces. Again the cubical form increases fastest, as is shown by a lengthening of the lines B, which form the edges of the square faces and are caused by the union of the square and the hexahedral faces. The study of the variations in the forms of growing crystals is more fascinating if the investigator is not following a beaten path, therefore I shall refrain from dwelling upon distorted crystals, and the conditions favoring imperfections. This article has been confined to the study of the half of the crystal, a form taken by natural crystals in upward growth. Let us now pass to the nearly perfect crystal.

(To be continued.)

CINCINNATI, OHIO, March 26th, 1879.

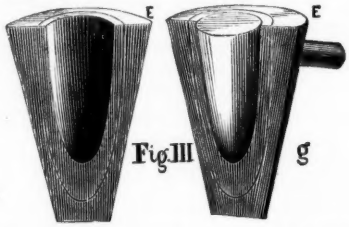


Archibald's Suppository Machine.

MR. H. C. ARCHIBALD, of 4099 Lancaster ave., Philadelphia, has recently invented a machine for making suppositories by compression and without the aid of heat, which is figured in the adjoining illustrations and may be thus described. The proper amount of material, in powder, having been weighed out and mixed with finely-grated cacao butter on a pill-tile with the aid of a spatula, is then ready for compression. Attention needs to be paid, however, to the proportion of cacao butter added, since the suppositories are of uniform size according to the sizes of moulds employed, and the bulk of the ingredients needs therefore to be proportioned according to the number and size of the suppositories demanded.

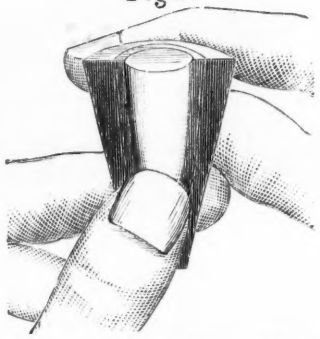
The machine itself consists of a brass hopper *A*, held by a screw *I* firmly in a socket provided for it in an iron stand; below the hopper is a pivoted piece capable of being turned to one side and serving as the support for the brass

mould, shown in Fig. III. A plunger *B* is made to rise and fall by means of a rack and pinion movement operated through the lever *C*. The mode of using the apparatus is as follows: the plunger being raised and the mould swung into place under the hopper, a sufficient quantity of the ingredients to form one suppository are dropped in. The lever is then rotated to the position shown in *c*, Fig. I., and forcibly compressed. The lever is next turned to the position shown in *c*, Fig. II., and the piece *D* turned to one side. This cuts off the base of the suppository smoothly and the operation is completed. All that now remains is to re-



move it, which is accomplished by lifting out the suppository and one-half of the mould by means of the pin affixed to the latter (Fig. III., *g*) and then, by slight pressure in the manner shown in Fig. IV. the suppository can be entirely detached.

Fig IV



We have operated one of these machines, and see no reason for doubting the claim of its inventor that it will produce accurate and elegant results with the greatest degree of expedition yet attained. This mode of preparing suppositories is likely to be especially valuable when heavy substances are combined with the cacao-butter and which, by the process of melting and turning into moulds, are likely to settle to the bottom. The cost of the machine, complete, is $6.00.

Rancid Lard can be greatly improved in quality by thoroughly washing it in lime water. This lime-water can be easily made by putting a good-sized lump of lime to a bucket of water, stirring it well, and afterward allowing the lime to settle.—*Confec. Jour.*

CONTRIBUTIONS FROM THE ORIENT.

BY XAVIER LANDERER.

On Orange-Flower Water.

Many hundred flasks of orange flower water (*ἀνθόνερον*, anthóneron), prepared from the flowers of *Citrus Aurantium* and *C. medica* are annually exported from the island of Chios (Sakys*) to Europe. Those who distil the so-called mastix-raki (*ρακί*, raki, brandy), or mastix-rosoglio, prepare also the anthoneron. When the flowers run short, the fresh leaf-tips are had recourse to, and the product then goes by the name of mytoneron (from *μύτη*, myte, nose or point). If a few drops of fresh oil of neroli are added to the last-named water, it cannot be distinguished from genuine orange-flower water. The Jews in Salonica, who live there to the number of 40,000, and who make it a business to adulterate and imitate Oriental products, make a spurious orange-flower water, by impregnating salt or sea water with oil of neroli, which is then sold by the retailers in the Orient in small flasks covered with wickerwork, and is exported to the most distant regions of Asia Minor. The women use it as an antispasmodic remedy. The genuine aqua naphæ is sold upon Chios for 60, 70, and 80 leptas the oka (about 5, 6 and 7 cents per pound); the mytoneron for 30–40 leptas per oka (2½ to 3½ cents per pound). Both kinds of water may of course be distinguished by a careful analysis, but the best practical test is the odor and flavor.

On the Orange Trade in Greece.

While oranges are universally sought after and used during the hottest months of the year, speculators generally succeed in clearing the market of its stock before the real season begins, when they gradually dispose of their accumulated stock at an immense profit. Oranges may be kept without spoiling for three or four months, by burying them in dry sand in deep, cool cellars.†

Oriental Sand and Mud Bath.

In many low plains in the neighborhood of the sea, immense quantities of sand are constantly deposited from the inrolling waves, particularly at the promontory Sunium, near Missolunghi, near Corinth, and on some of the islands, as Naxos and Mykone. These places are visited by persons affected with chronic rheumatism, anchylosis, chronic synovitis of knee-joint, for

*Sakys is the Turkish name for mastic, and Chios has received its name from it. It is often written *sachex*, (=mastic). Mr. O. Blau, of Odessa, has pointed out that this word, which has no etymological basis in the so-called Turanian languages, has been brought from the *Baltic*, where it was used in the form of *sackis*, to denote *resin* in general (f. i. in old Prussian vocabularies). See *Zeitsch. d. Deutsch. Morg. Ges.*, 29, 582.—Ed. N. R.

†The oranges of Chios, which attain a considerable size, are reported to keep better than any others. With care they may be preserved unimpaired in flavor for six months.—Ed. N. R.

the purpose of taking a sand-bath. The patients, who are generally of the poorer classes, bury themselves in the sand or cause others to cover them with it, so that only the head, which is covered with a night-cap or straw hat, remains free. It is a ludicrous sight to see twenty or thirty such odd-looking heads sticking out of the sand. In consequence of the weight and the saline character of the sand, the skin of the patient becomes so red that, when they emerge from their sandy bed—which they occupy as long as possible—they look like boiled lobsters. Wooden huts, or tents improvised with oleander and plantain branches are used as bathing-houses, and a piece of bread, some grapes, and a glass of wine generally constitute the meal of a patient. Direct inquiry from the patients has elicited the fact that the effects of this sand treatment are decidedly beneficial.

Another variety of bath is likewise not uncommon, namely, the so-called mud-bath. In the canals and ditches, into which the sea water is allowed to flow, in order to obtain common salt by spontaneous evaporation, a motherwater containing chiefly magnesium bromide remains behind, after the crystallized salt has been removed. At the same time, an aluminous mud collects at the bottom. This mother-water, together with the mud, is used by patients affected with chronic splenitis caused by the frequent malarial fevers prevailing among the workmen in these localities, and with intestinal infarctions. The method consists in smearing the whole body with the saline mud, and in exposing themselves afterwards to the rays of the sun until the coating has become dry, when it is washed off with the saline mother-water Sometimes both the sand and the mud-bath are used locally on a special portion of the body only, as, for instance, the legs or feet.

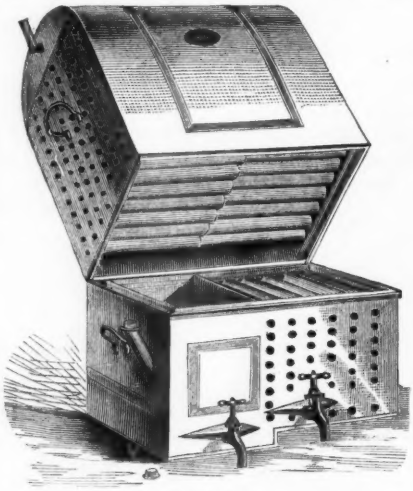
ATHENS, GREECE.

Ground-Honey.

M. PIERRE ARNOUX, lately travelling in Abyssinia, discovered in small cavities in the soil a species of honey without wax, produced by an insect resembling a large gnat. Examined by M. Vielliers, this ground-honey was found to have the following composition: Water, 25.5; fermentable sugar, 32; mannite, 3; dextrin, 27.9; ashes, 2.5; divers matters, 9.1; total, 100. The undetermined matter contained a small proportion of some acid principle, the nature of which M. Vielliers had not been able to make out. The composition of this honey resembles that of the manna of Sinai and Kurdistan, formerly analyzed by M. Berthelot, that of the sugar found in the leaves of the plane tree by M. Boussingault, as well as that of ordinary honey. It is, however, distinguished from all those substances by the total absence of cane sugar. In Abyssinia this substance is collected by the natives, and used as a remedy for affections of the throat.

Lynch's Still.

PURE water for drinking, cooking, and technical purposes is a highly necessary and desirable commodity, but is accessible only in some favored localities in the country, and in larger cities. The effects of bad water upon the health of the consumer are too well-known to be dwelt upon here, and many are the contrivances in the shape of filters, etc., devised for its purification. The only effectual way, however, of obtaining perfectly pure water is by distillation. An apparatus for this purpose has lately been patented by *Mr. Timothy L. Lynch*, of No. 56 West Broadway, New York, of which we give an illustration. It consists of two separate portions, of which the lower one represents the still proper, and the receiver, both being separated from each other by diaphragms. The chamber representing the receiver is provided with a series of flattened upright chambers, perforated in their front and



Lynch's Still.

rear walls, for the free passage of air, so as to prevent the water which has collected in the receiver from becoming overheated. The upper part of the apparatus which represents the condenser is traversed by a series of flat double-walled chambers or boxes, having a common inlet on one side (near the top) and an outlet on the other, for the circulation of a stream of cold water, which may be supplied either by a hose attached to a regular water supply pipe, or in the old-fashioned way by means of a funnel, and a receptacle for water standing above.

The lower part is provided with a side-tube for refilling the still, and with two faucets, one for drawing off, if required, hot water directly from the still; the other for drawing off the distilled water. The apparatus may be placed on any stove or range. We have tried it and find it will yield, with a moderate fire, between 5 and

6 quarts of distilled water per hour. It is manufactured of various sizes, and at prices varying from $10.00 to $25.00.

Estimation of Diastase.

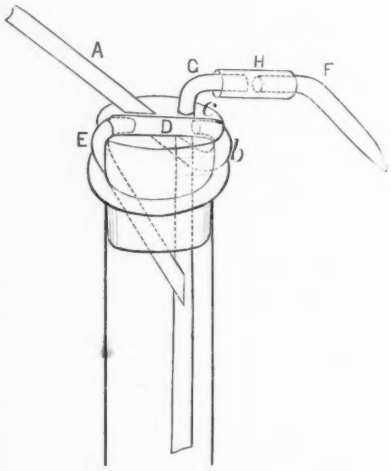
THE frequent use, in medical practice, of preparations of malt, makes it very desirable to possess a method by which the most valuable ingredient, namely the diastase, can be estimated with sufficient accuracy. Two methods have been recommended for this purpose, one of which consisted in allowing the diastase, or the substance containing it, to act upon starch in presence of water at the temperature of from 100° to 120° F., in an atmosphere of carbonic acid gas. The other method consisted in determining the amount of matter yielded by bread to water, and if working with a solution, such as malt extract, determining the amount of solid matter contained in it. A weighed portion of bread is mixed with water, a weighed quantity of malt extract added, the solution rendered slightly alkaline with bicarbonate of sodium, the mixture allowed to stand at 100° F. for some time, the solution filtered, and the amount of solid matter determined in the solution by evaporation to dryness. The amount of solid matter in excess would consist mainly of maltose and dextrin. This method has the drawback that if any liquid other than water be present in the malt extract, such as alcohol or glycerin, the matter which would probably be dissolved from the bread by them would be weighed as maltose and dextrin resulting from the action of the diastase on the starch contained in the bread.

Messrs. W. R. Dunstan and A. F. Dimmock, from whose paper on the Estimation of Diastase, contained in the *Pharm. Journal* of March 8th, we have in part quoted the preceding paragraph, propose a modified process for this purpose, which they describe in the following words. "We have recently estimated the relative value, chiefly as regards diastase, of several different kinds of malt extract, and have found the following process to answer very well. It differs from the other processes which we have described, in dealing with the direct action of diastase upon starch, independent of the products of that action. By means of this process the starch-converting power is determined with considerable accuracy. Two flasks of about a quarter litre capacity are selected, and into each from 1 to 3 grm. of starch, previously dried at from 180° to 212° F., is added. About 100 cc. of water are poured into each, and both are heated with constant agitation over a Bunsen burner until the starch is all gelatinized, as diastase has no action on ungelatinized starch. The flasks are then cooled down to 100° F. 10 grms. of the malt extract or solution containing the diastase are made into a solution with 100 cc. of water. To one of the above flasks a certain number of cc. of the diluted solution containing diastase are added, and to the other just twice that amount. The flasks are now allowed to remain for three hours at a temperature of 100° to 120 F. At the expiration of this time a drop of the solution out of the flask, to which the largest amount of diastase solution had been added, is placed on a white porcelain plate, and near it is placed a drop of a dilute solution of iodine in iodide of potassium. If, when the two drops are mixed, any color results, more of the solution of diastase must be added; but if no color is produced in the flask to which the largest amount of solution has been added, then the flask containing the smaller amount must be tested in the same way. If any color be produced, more diastase solution must be added until the exact point is reached when no color is produced, three hours being allowed between each addition of the diastase solution.

"An example will make this clear. Two flasks, each containing a solution equal to .1 grm. of starch, made by boiling that amount of starch with 100 cc. of water, are cooled down to 100° F. A solution of the malt extract is now made containing 10 grms. in 100 cc. of water. Into one of the flasks 10 cc. of the solution of malt extract are accurately measured from a burette. To the other flasks 20 cc. of malt extract solution are added, and the flasks allowed to stand for three hours at from 100° to 120° F. At the end of this time a drop of the solution is taken from the flask, to which 20 cc. of solution of malt extract have been added, and tested with the iodine solution and found to give no color; a few drops of the solution of iodine are also added to the solution in the flask to make quite sure that no starch remains unconverted. The other flask, to which 10 cc. of malt extract solution have been added, is now tested in a similar manner with iodine on a white plate, and found to give a blue color; of course, no iodine need be added to the liquid in the flask when this is the case. We now know that the amount required is between 10 and 20 cc. Therefore, to the flask to which 10 cc. had been added, 5 cc. more of the malt extract solution are added, and the solution set aside for three hours at the same temperature as before. At the expiration of this time, it is again tested with iodine, and is still found to give a blue color, but not so decided as before; 2 cc. more of the malt extract solution are now added, and the flask allowed to stand for another three hours. On testing it now with iodine, a very faint color only is produced: .05 cc. more of the solution of malt extract is now added, and the solution allowed to stand for a further three hours, as before. At the end of this time no color is produced, even when the iodine solution is added to the flask. Therefore, all the starch has been converted, and has used up 17.5 cc. of our standard malt extract solution. Now 17.5 cc. of the malt

extract solution are equivalent to 1.75 grms. of malt extract. And as .1 grm. of starch requires 1.75 grms. of malt extract, one grm. of starch will require 17.5 grms. of malt extract to convert it into maltose and dextrin. This process has been applied to all the malt extracts which we have examined, and by its use we have obtained very good results. With the same extract, using different quantities of starch, the following were the results of four experiments by different operators—17.4, 17.2, 17.2, and 17.5 grms. of malt extract were required to convert one grm. of starch.

"We are at present engaged in endeavoring to apply this process to the estimation of the diastase in different samples of malt. The above process accurately indicates the point at which the last trace of starch is converted. Large quantities of diastase are necessary to effect the entire conversion of every trace of starch; whereas, as is well known, very small quantities of diastase will convert relatively large quantities of starch into a fluid condition."—*Pharm. Journal*, March 8th, 1879.



A New Form of Wash-bottle.

In this wash-bottle the blow-tube consists of three parts—*A*, *D*, *E* (see sketch). *A* and *E* are pieces of glass tube. *A* passes through the stopper obliquely, outside the bottle, is bent at *b*, and terminates at *c*. *E* is bent as shown, and passes through the stopper to the interior of the bottle. *D* is a piece of caoutchouc tubing which stretches across the top of the stopper, and connects *A* and *E*. Now it will be seen that by the action of the forefinger upon *D*, the blow-tube can be opened and closed, at pleasure. The advantages of this arrangement are the following:

1. That after you create a pressure on the liquid in the bottle by blowing through the blow-tube, you can, by compressing the caoutchouc tubing, maintain this pressure without continual blowing, until it expends itself by expelling liquid from the jet.
2. The disagreeable reflux of steam into the mouth when washing with hot water, of ammonia or acid fumes when using solution of either of the latter, can be completely prevented.
3. The flow of the liquid from the tube *A*, when it is desired to use the bottle in that way, can be so accurately regulated by pressing the caoutchouc tubing that it is particularly valuable for diluting, filling measuring vessels, etc.

The jet I use, and which has been suggested by a friend, needs a word of explanation. It is bent as shown at *F*, and attached to the tube *G* which dips into the liquid in the bottle, by a thick piece (thick enough to maintain the jet in position) of caoutchouc tubing *H*, by turning which round *G*, the jet can be directed upwards, downwards, or sideways, as desired.

This wash-bottle can be used in every respect like the ordinary wash bottle, and as conveniently, besides having the advantages described above. It has been used for the last nine or ten months by myself and others in the laboratory at Crewe, and has given every satisfaction. It is not at all liable to get out of order, and is but slightly more difficult to make than the ordinary form of bottle.—M. H. Foye, in *Chemical News*, 1879, 19.

New Mode of Using Ether as an Anæsthetic.

Dr. Packard (*Phil. Med. Times*, December 21st, 1878) recommends for operations not lasting over forty seconds, the following procedure: Let the patient lie upon the sofa, and take a sponge wet with ether in his own hand, directing him to hold the other arm up in the air. After breathing the ether for a few moments, the arm will drop and you will have from thirty to forty seconds of unconsciousness in which to operate. The sponge is removed and the patient is ready to go about his business. This procedure gives rise to no headache, nausea, or other unpleasant symptoms, and is particularly useful in children. The chief source of disappointment is in not recognizing the right moment; for if this be allowed to pass, unconsciousness will not again occur until full etherization. When the arm wavers, be ready, and as soon as it drops, perform the operation, and there will be no pain felt.

Preservation of Fruits.—Various kinds of fruits, particularly apples, are exported from this country to Europe, packed in gypsum. The fruits are carefully wiped, to remove the waxy scum and moisture, and are then placed in casks and imbedded in freshly burned gypsum or plaster of Paris, in such manner that no fruit touches another. The flavor and appearance of the fruits are thereby completely preserved, and they fetch a high price in Europe.—*Pharm. Zeit.*

A METHOD OF COATING PILLS EXTEMPORANEOUSLY.

SIR :—Allow me to place before the readers of your journal what I find to be a splendid temporary coating for pills. It is very simple, and in many cases proves to be *just the thing*, especially with those who find a difficulty in swallowing medicine in this form, viz. :

Wet the pills slightly with simple syrup, roll gently in powdered elm-bark until thoroughly covered, allow them to dry, and you will have a firm coating, disguising the taste and assisting greatly in administering the pills.

Yours truly, W. G. S.

LEBANON, KY., March 24th, 1879.

The Cleaning of Wine-Casks.

ONE of the most important conditions necessary for the preservation of fine wines is the thorough cleaning of the casks in which they are to be stored. The best and richest wine, if kept in a badly-cleaned cask, is sure to deteriorate sooner or later. Many are the processes which have at one time or another been recommended for thoroughly cleansing casks, and a number of them are no doubt equally efficient. Prof. Carpené has, however, some time ago proposed a new method for accomplishing this purpose, which is said to give excellent results.

The first object is, the thorough drying of the interior of the cask. This is accomplished by means of the apparatus illustrated in the cut. A tinned-iron tube is pushed through the tap-hole a few inches inside of the cask, so as to leave the longer portion on the outside ; an alcohol lamp with three wicks is placed below this, which heats the tube and the air contained therein, thus establishing a rapid current of hot air which permeates the interior of the cask and passes out through another tube, serving as draft-chimney, inserted into the bung-hole. $6\frac{1}{2}$ fl. $\frac{\mathfrak{z}}{3}$ of alcohol were found by Savelli to be sufficient to completely dry an old cask of the capacity of 57 gallons.

As soon as the cask is dry, 10–12 grams of copper-turnings are placed into a small beaker, 25–30 grams of concentrated nitric acid are added, and as soon as yellow vapors are given off, the beaker is lowered by means of wire into the cask, so as to be about in the centre. When the cask is filled with the vapors, the beaker is withdrawn, and the bung firmly inserted. After 20–30 hours the cask is filled with pure water, and washed, when it will be fit to receive the most delicate wine.—*Die Weinlaube.*

Hesse's Test for the Purity of Sulphate of Quinia.

OTTO HESSE has published a new process for testing sulphate of quinia, which depends upon the following two facts

1. Water, at a temperature of 50 to 60° C. dissolves sulphate of quinia but sparingly ; but it dissolves the other sulphates easily, without decomposition, that is, without separating free alkaloids.

2. If the solution, after cooling, is supersaturated with ammonia, and shaken with a definite quantity of ether, sufficient to dissolve the quinia which should be present, this quantity of ether will be insufficient to dissolve the other alkaloids whenever they are present beyond a certain percentage.

The reaction is performed in a test-tube, which Mr. Hesse calls "Chinometer," *i. e., quinometer.** It has an internal diameter of 10–11 millimetres (about $\frac{7}{16}$ inch), and a length of 120 mm. (about $4\frac{3}{4}$ inch). In its central portion it is provided with two circular marks, the lower one of which corresponds to a capacity of exactly 5 cubic centimetres, and immediately above, another, indicating an additional centimetre. Let us denote the bottom of the test-tube with *A*, and the two marks with *B* and *C*, then the space between *A* and *B* is equal to 5 cm., that between *B* and *C* equal to 1 cm.

The sample of sulphate of quinia under examination is introduced into a larger test-tube, shaken with water (see below) at 50–60° C, and the test-tube set aside for about ten minutes, or until the mixture has become cold. The contents of the tube are then transferred to a small filter of the diameter of about 60 mm. ($2\frac{3}{8}$ inch). Before pouring out, the mixture should be gently shaken, to prevent the magma from suddenly dropping out of the test-tube on inverting it. The filtrate is allowed to run directly into the quinometer, up to the first mark *B* (altogether 5 cc.). Upon this enough ether (spec. grav. 0.728) is poured to reach to the next mark *C* (that is, one cubic centimetre), and finally five drops of ammonia water (spec. grav. 0.960), are added. The tube is then closed with a cork and gently shaken several times. The ammonia separates the alkaloids, which pass into the ether,

* This may be purchased from Bach and Riedel of Berlin (Alexandrinenstrasse 57) for 0.5 marks.

and the latter floats on top of the aqueous saline solution. On now examining this ethereal layer in definite intervals, with a loupe, the quality of the sample of sulphate of quinia in question may be readily determined.

The test may be performed at the ordinary temperature and does not require special training; while its results are thoroughly reliable.

The directions for executing the reaction are thus condensed by Mr. Hesse:

"Introduce 0.5 gram of sulphate of quinia into a test-tube containing 10 cm. of hot water (between 50° and 60° C.), and shake well repeatedly. After a lapse of ten minutes, the cooled liquid is filtered into the quinometer to the height of 5 cm., 1 cm. of ether is added, and finally 5 drops of water of ammonia. The quinometer is then closed with a cork, shaken gently a few times, and allowed to stand at rest for *two hours*. At the end of this time, the ethereal solution floating on top of the aqueous layer must be found free of crystals, when examined with a loupe."

In this case the sample of sulphate of quinia is sufficiently pure, although it may still contain up to 25% sulphate of cinchonia, 0.5% sulphate of quinidia (conchinine), and nearly 1% sulphate of cinchonidia and homocinchonidia, which quantities remain undetected by the above process. If, however, these bodies are present in any larger proportion, the ethereal layer will be found to contain crystals, which are granular in the case of cinchonidia and homocinchonidia, or concentric needle-group in the case of cinchonia and quinidia (conchinine).

If three per cent or more of sulphate of cinchonidia or of homocinchonidia is present, a granular crystallization takes place immediately after shaking or at least within three minutes afterwards. If the crystals form only after the lapse of about ten minutes, it may be concluded that the sample contains just about 2% of foreign alkaloidal salts. In presence of only 1% of the latter, the ethereal solution is free from crystals for at least 2 hours; but after 12 hours' standing, a few crystals of cinchonidia or homocinchonidia may be observed.

Should 12 hours have elapsed without any crystals making their appearance, the last-named two alkaloids may be assumed to be present in a quantity less than 1%.

In order to see whether either one of these alkaloids is at all present, it is only necessary to place the cork loosely over the quinometer, so that the ether may evaporate slowly. If only 0.5% of the impurity is present, a plainly crystalline residue is obtained; and if only a trace is present, sporadic crystals will be found imbedded in the amorphous jelly of quinia which remains behind.

The ethereal solution, immediately after shaking, likewise separates all cinchonia over 0.5% and all quinidia (conchinine) over 1%.

The properties of sulphate of quinia are such that a contamination with sulphate of quinidia is almost impossible, to judge from the method of manufacture. Should the latter salt be found, however, it would be highly probable that it has been added for the purpose of adulteration.

It is different with the sulphates of cinchonidia and homocinchonidia. Although they are easily soluble in water, yet they crystallize together with sulphate of quinia, and altogether accompany the latter with obstinacy, so that it requires repeated crystallizations to free the quinia salt from the others.*

Although it is not demanded that sulphate of quinia should be chemically pure, yet there is much of this salt in the market which may be so regarded. Provided the proper kinds of cinchona bark are available in sufficient quantity, the manufacturer is able to furnish a pure product. But this is not always the case, as Mr. Hesse's experience has shown him; it is often necessary to have recourse to barks which are rich in cinchonidia, and the product in this case is apt to contain, in spite of careful working, up to about 1% of sulphate of cinchonidia (or homocinchonidia). Therefore, in order to make the above test applicable to all cases, Hesse directed that the ethereal solution should be examined *two hours after* being shaken with ether.

According to Hesse, this test surpasses all other quinia tests in precision.

Hydrochlorate or *muriate* of quinia may be examined for impurities in a similar manner; it is first treated with sodium sulphate to change it into sulphate of quinia.

"Introduce 0.5 gram of hydrochlorate of quinia and 0.25 gram of crystallized sodium sulphate into 10 cm. of hot water (about 60° C.) contained in a test-tube, shake well, and proceed as in the case of sulphate of quinia."

It is best to use water of at least 60° C., or even a trifle hotter, as the resulting sulphate of quinia, produced by double decomposition, separates in this case in longer crystals, and the subsequent filtration is thereby much facilitated. —*Arch. d. Pharm.*, Dec., 1878.

Dr. C. Schacht, of Berlin, has examined sulphate of quinia prepared by different factories by this test, and has found the following results:

Quinia sulphate of—

1. *C. F. Böhringer & Sohn* in Mannheim, showed immediately after shaking a granular crystallization in the ethereal layer; hence it contains, according to Hesse, at least 3% of sulphate of cinchonidia and homocinchonidia.

Dried at 120° C., it lost 5.54% water.

2. *F. Koch* in Oppenheim.

Showed the same reaction.

Dried at 120°C., it lost 4.89% water.

* Hesse adds that sulphate of quinia which has stood Kerner's test (see NEW REM., 1877, p. 136), may be obtained absolutely pure by one recrystallization.

3. *Chinin-Fabrik* in Braunschweig.
Showed the same reaction.
Dried at 120° C., it lost 5.06% water.
4. *Conrad Zimmer* in Frankfort-on-Main.
Showed the same reaction.
Dried at 120° C., it lost 4.53% water.
5. *Fried. Jobst* in Stuttgart.
Showed no crystals, even after standing two hours in the quinometer.
Dried at 120°C., it lost 15.39% water, which corresponds very closely with the formula $2C_{20}H_{24}N_2O_2.H_2SO_4.7\frac{1}{2}H_2O$.—*Phar. Zeit.* 1879, No. 7.

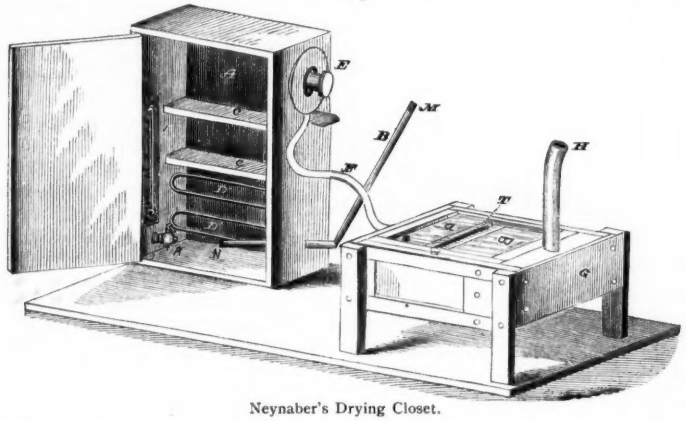
Schacht's paper is criticised in No. 9 of the same journal by Mr. Chr. Rump, who finds it singular that the first 4 samples contained such small quantities of water. He supposes that the samples must have been effloresced. He also doubts the expediency of drying at 120° C., in order to expel all the water, since this may lead to over-heating. He prefers drying in an ordinary drying-chamber. In this way he found Jobst's quinine to lose 11.9%; Böhringer's, 11.4%; and Zimmer's, 6.4% of water.

He also proposes an improvement in the original test, namely, to *weigh* the different substances and solvents instead of *measuring* them. The process would then be: Introduce 0.5 gm. of quinia sulphate into a test-tube, weigh into it 10 gm. of water, immerse the tube into hot water until the salt is dissolved, let cool, and filter 5 gm. into another test-tube. Add 1 gm. of ether (1 cc. is not enough according to Mr. Rump) and 3–5 drops of ammonia; then cork the test-tube and set on one side.

An Improved Drying-Closet.

MR. A. F. W. NEYNABER, of this city, has recently patented* a closet for the drying of pills and other pharmaceutical and chemical preparations, which is intended to cause a uniform current of dry air of a certain and even temperature to come in contact with the substances. The chamber *A* is nearly air-tight, excepting its communication, by means of the pipe *B*, with the outside of the building. In this chamber are shelves, *C C*, for supporting sieves or boxes to hold preparations which are nearly dry. *D D* is a coil of steam-pipe (for which other heating apparatus may be substituted). A blower *E*, driven by a belt, draws the air from the closet and forces it by the pipe *F* into the chamber *G*, which is also provided with trays and boxes for pills, etc. This chamber is provided with a glass door to facilitate inspection of its contents. *H* is a pipe for discharging the air used, and may be connected with a chimney, if it is desired to increase the draught. *I* and *T* are thermometers for regulating the temperature.

There is also provided a steam-cock, *R*, for the admission of live steam to the chamber *A*, if it is wished to convert the apparatus into one for moistening pills which are too hard to be put on to needles for coating. The pipe *B* has wire gauze strainers at *M* and *N* to exclude impurities.



Neynaber's Drying Closet.

* Patent No. 211,770, dated January 28th, 1879.

Test for the Purity of Quinidia.

CHEMICALLY pure sulphate of quinidia (conchinine) is for some years past to be found in the market; German factories especially prepare it in this condition. But frequently it is found contaminated with other alkaloids. Mr. Otto Hesse has previously given a method by which even traces of other cinchona alkaloids may be detected in this salt. This test, however, does not appear to have received the attention which it deserves. He, therefore, republished it in the *Archiv der Pharm.*, Dec., 1878, p. 495, as follows:

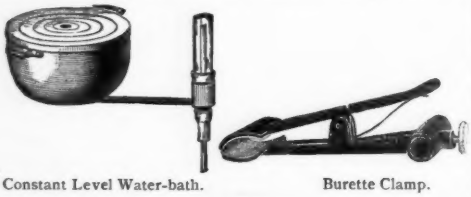
"0.5 gram of sulphate of quinidia (conchinine) and 0.5 gram of potassium iodide are introduced into a test-tube containing 10 cc. of hot water at about 60° C., and the whole is briskly shaken. After the lapse of one hour the whole is filtered, and the filtrate mixed with one drop of water of ammonia. If the sulphate was pure, no cloudiness must be produced."

ON SOME NEW FORMS OF APPARATUS.

BY M. BENJAMIN, PH.B.

A NEW form of constant level water-bath has recently been devised which is so simple that I will call public attention to it.

Much inconvenience has been experienced by chemists, who having occasion to leave their laboratories for a while, on returning find that their baths have become dry, and possibly that the contents of the vessel over the bath may have been transferred to the floor by the increased heat; and the analysis is thus destroyed. The present ingenious device is so constructed as to obviate any such difficulty. Its mode of working is simple and is as follows: A large vessel (a common glass bottle will answer) is filled with water and placed on a shelf or support above the bath. The water flows through a piece of rubber hose to the larger glass tube on the right of the figure, running down this tube it passes to the bath through the copper tube connected with the bottom of the bath. Within this glass tube is a smaller one, which is



Constant Level Water-bath. Burette Clamp.

on an exact level with the top of the water bath through which any excess of water passes away and falls to the ground. The flow of water from the bottle can easily be regulated by means of an ordinary pinchcock. This water-bath is finding considerable use among students in the different laboratories, who are liable to be called away to lectures, so that much of their time, otherwise lost, is saved by the use of this appliance.*

The second engraving represents an improved form of burette clamp which consists of two arms, one of which is fixed, while the other is held in position by means of a joint and is controlled by a spring, so that it acts as a lever and by pressure; it may be opened to any desired width.

The end of the clamp is provided with rubber cushions so as to hold a glass burette, or perhaps a funnel which is placed between its arms. This clamp is made to slide on the upright of an ordinary retort stand.

NEW YORK, March 24th, 1879.

Purification of Alkaline Hypophosphites.

MR. WILLIAM EYKMAN, pharmacist at Tokio, Japan, proposes the following method for eliminating from the commercial alkaline hypophosphites any phosphite or phosphate which may be or is generally present. In describing his process, he only speaks of the hypophosphite of sodium, but, of course, it is equally applicable to other alkaline hypophosphites.

25 grams of commercial hypophosphite of sodium and 1 gm. of hypophosphite of barium (a quantity which is fully sufficient to precipitate any accompanying phosphite or phosphate) are mixed, and water is added so as to bring the bulk of the solution not over 50 cc. After a while, without previously filtering, 200 cc. of absolute alcohol are added and the mixture allowed to remain at rest. Finally, it is filtered. In this way all the phosphoric acid is precipitated, and besides, nearly all the barium as hypophosphite. To the clear filtrate is added, in small quantities at a time, a sufficient amount of a solution of sodium sulphate to precipitate the remainder of barium still in solution; 100 cc. more of absolute alcohol are added, and the liquid again left at rest. After filtering, the clear liquid is placed into a large flask, and 500 cc. more of absolute alcohol are added, together with enough absolute ether, so that on being strongly shaken, all the hypophosphite of sodium held in solution separates. The salt is obtained in fine needle-shaped crystals completely soluble in water and alcohol, and perfectly pure.—*Journ. de Ph. d'Anvers*, 1879, 57.

[The method appears circumstantial and expensive, but if a *pure* hypophosphite is really desired, it appears to be a very suitable process, and as the alcohol and ether may be nearly all recovered, the cost of the product is thereby materially diminished.—ED. N. R.]

THERAPEUTIC USES OF BOLDO.

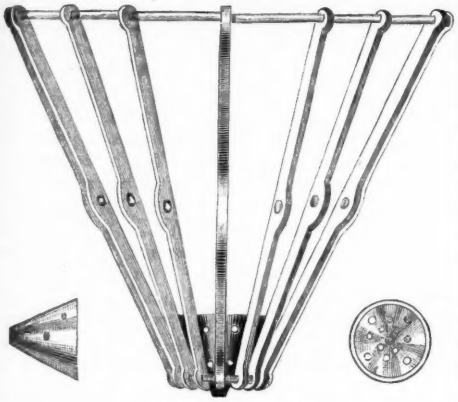
I HAVE recently had under my charge a lady who for four months suffered from gall-stone, and the threatened return of similar attacks, together with hepatic trouble, subperitoneal inflammation, etc., etc. She had been treated by me on scientific principles with the best modern remedies, but still suffered from that peculiar "gall-stone, wedge-like pain." Having tried tincture of boldo with benefit in other cases, I put her upon the use of a strong tincture in doses of 20 to 25 drops three times a day. Since employing this last prescription the pain has entirely left her, she is bright and cheerful, and pronounces herself to be perfectly well and cured. I have likewise used this remedy (1) with benefit in a case of gastro-intestinal debility, arising from gout and its consequent pain; (2) in a case of cardiac neuralgia, and (3) with improvement in the case of a patient suffering from periodical attacks of dipsomania. I think that in the latter it lessened the desire for drink, and gave more tone to the stomach and intestines. SAML. W. FRANCIS., M.D.

NEWPORT, R. I., March 26th, 1879.

* [This appliance, though here described for the first time that we are aware, has already been in use in German laboratories.—ED. N. R.]

Holt's New Filter-Frame.

Dr. Charles L. Holt, of Portland, Me., has invented a new modification of a filter-frame which is intended for the use of chemists and apothecaries, and being made entirely of India-rubber, is not acted on by corrosive liquids. It has another improvement consisting in a hard



rubber perforated cone to be placed in the lower extremity as a support to the point of the filter, and is intended to prevent its being torn by the weight of the column of fluid; the ring connecting the upper ends of the slats is of soft rubber, and admits of the automatic adjustment of the latter.

Baptisia Tinctoria in Typhoid Fever.

A paper read by Dr. Laurence Johnson, of New York, at the recent meeting of the Med. Soc. of the State of New York, on the "Action of Baptisia Tinctoria in Typhoid Fever," is summed up as follows by the reporter for the *Boston Med. and Surg. Jour.*: Baptisia tinctoria, although formerly believed to possess antiseptic powers rendering it useful in diseases having a tendency to putrescence, has of late fallen into utter neglect with the regular profession. It is, however, extensively employed by the eclectics and homœopaths; the latter especially considering it very valuable in typhoid fever. It was to test its value in this disease that the experiments recorded were made. The preparation used was a tincture of the root, and it was administered in small doses (from one to five drops) at intervals of from one to three hours. The ordinary general measure of treatment, such as cool sponging, milk diet, and stimulants, when required, were not neglected, and any casual indications were promptly met and appropriately treated. Careful records of pulse and temperature were kept and were shown in tables accompanying the paper.

Of the seven cases whose histories were detailed, three at least had, at the beginning, symptoms betokening attacks of severity. The pulse, temperature, and general condition of these patients left no room for doubt upon the point, yet the improvement under treatment was remarkable. In general, it may be stated that the cases, when treatment was well under way, were characterized by lack of symptoms sufficiently grave to occasion anxiety. There was a marked absence of delirium and comparatively little diarrhœa, though at the beginning, in two or three cases, these were very troublesome features. The temperature seemed to be reduced by the drug, and in one case, where the morning temperature was as high as 106° F., when Baptisia was employed for the first time, it never reached that point again, while the patient was fully convalescent in ten days. All the patients made good and comparatively quick recoveries.

Taken altogether, although the results obtained in such a small number of cases could not, of course, be considered conclusive, they appeared to establish a certain relation of cause and effect between the drug and the favorable course of the disease. The evidence on this point Dr. Johnson regarded as sufficient at least to encourage further trials, which he hoped no mere theoretical considerations would be allowed to prevent.

Russian Therapeutics.

In the province of Smolensk (Central Russia), the peasants, according to the *Vratschebniya Vedomosti*, No. 299, treat the convulsions of infants, and what they call "the black disease" (epilepsy), by means of an extract made from the flowers of the common lily of the valley. They are crushed in a wooden mortar; then put into a teapot or other earthenware vessel, and boiling water is poured over them. The pot is then well covered and allowed to stand for an hour. When the infusion has cooled down it is passed through a sieve, sweetened, and given to the patient. Infants are given a spoonful at a time thrice daily, and adults a tumblerful in the same way during nine days. If the exact time of the attack be known, or the fit be announced by certain symptoms, a double dose of the decoction is given in good time. The flowers are kept during the winter by pouring brandy over them; but the latter remedy is said to be less powerful than the fresh flowers. According to the peasants, the fits never stop suddenly, but the intervals between them gradually grow longer, the attacks become less severe, and the patient recovers. In the province Tver, the peasants cure ague, which is very common on account of the large marshes and swamps, by extracting the flowers of the blue corn-flower (batchelors' buttons) with brandy or alcohol, for the winter, or in the summer by making an infusion of it as above. It is not sweetened, and the patient is allowed to drink as much as he

chooses. They say that this infusion "drives the disease out of man by water," *i. e.*, it really causes a very profuse perspiration, and it is said that intermittent fever generally ceases soon after the remedy has been used, especially if the patient abstain from fish, cabbage, kvas, and milk. The same infusion is also said to be very useful in dropsy.

Nitrite of Amyl in Ague.

Dr. W. E. Saunders, of Indore, calls attention to the value of amyl nitrite in ague, and records a number of cases in which, advantage has been derived from its use. The drug itself, he remarks, is inexpensive and goes a long way. He now uses *nitrite of amyl* mixed with an equal part of *oil of coriander*, to render it less volatile, and at the same time to cover its odor. He regards it as the most powerful diaphoretic he has seen, and he uses it in all cases of fever to produce diaphoresis. The following is one of his cases: Mr. F. C. came for treatment about 7 P.M. in the cold stage of ague. Two minims of nitrite of amyl were administered; sweating came on in seven minutes. He lay down for half an hour to get cool, and then walked home well. He next morning took a dose of quinine, and has had but one attack of fever without the cold stage since. Previous to this he had fever every day for one month, during which he took large doses of quinine. Dr. Saunders observes that he does not mean to say that quinine should not be used in the cases, for there is ample proof that it tends to check the return of the attacks, and removes to some extent the septic condition of the blood induced by the malarial poison, and this more especially if small doses of opium be combined with it. In no case did the amyl fail to remove the attack in about one-third the usual time, and in most cases the fever did not return. The method of administration he adopts is this: Four drops of the mixture or two of amyl are poured on a small piece of lint, which is given into the hands of the patient, and he is told to inhale it freely. He soon becomes flushed, and both his pulse and respiration are much accelerated, and when he feels warm all over, the inhalation is discontinued, as the symptoms continue to increase for some time afterwards. A profuse perspiration now sets in, which speedily ends the attack; in some cases, however, the cold stage merely passes off without any hot or sweating stage.—*Indian Medical Gazette* in *The Practitioner*.

Effect of Boiling upon Milk.

It is well-known that boiled milk has a totally different taste as well as different physiological effects from unboiled milk. According to Schreiner, the peculiar odor and taste of boiled milk are due to sulphuretted hydrogen, as can be easily proven. If milk is placed in a flask fitted with an upright cooler, and then boiled, sulphuretted hydrogen gas escapes from the tube and will blacken lead paper. After the milk has been poured out of the flask enough sulphuretted hydrogen gas will remain in it to give the reaction as well as smell. Milk that has been boiled, on standing, will not curdle as soon as that which has not been boiled, as every house-wife knows. But Schreiner says that it curdles sooner than unboiled milk if acids are added. He placed 10 cc. of milk, diluted with 25 cc. of distilled water in a flask, and added dilute sulphuric acid containing one-half gram of acid to the litre. A certain definite quantity of acid was always required to produce visible coagulation. Fresh milk which has been boiled always took 10 to 12 per cent less of this acid than it did before boiling.

The action of rennet upon milk is also affected by boiling. He found in numerous experiments that were made with the milk of different animals, that ten times the quantity of rennet required to curdle raw milk was insufficient to produce this effect upon boiled milk of the same kind and at the same temperature (95° F.), in ten times as long a space of time. The quantity of acid or of rennet necessary to curdle a given volume of fresh milk was found to depend upon the quality of the milk, *i. e.*, the amount of dry substance, or total solids. The milk of different kinds of cows kept upon the same food required different amounts of acid. If equal quantities of rennet were added to different samples of milk, the time required for coagulation at a given temperature increased with the amount of dry substance in the milk. The quantity of acid required to coagulate milk from the same cow at different periods increased regularly from calving to the time of drying up, corresponding to the constant increase of solids in the milk during the period of lactation. The total increase of solids for the whole period was 11 to 13 per cent in the Frieslander breed of cows; 12 to 13 per cent in those of Simmenthaler breed.—*Scientif. Amer.*

Banana Flour.

The banana has recently found a new use in Venezuela. It has the property of keeping the soil moist around it, in a country where sometimes no rain falls for months; so it has been employed to give freshness, as well as shade, to the coffee plant, whose cultivation has been greatly extended (Venezuela produced 38,000,000 kilogrammes of coffee in 1876). The Venezuelans can consume but little of the banana fruit thus furnished, so that attention has been given to increasing its value as an export. At the Paris Exhibition were samples of banana flour got by drying and pulverizing the fruit before maturity, and brandy from the ripe fruit. The flour has been analyzed by MM. Marcano and Muntz. It contains 66.1 per cent of starch, and only 2.9 of azotized matter.—*Confec. Jour.*

RECENT PAPERS.

Note on the more accurate Estimation of Quinia in Ferri et Quiniæ Citras, B. P.—(W. STEVENSON.) The Brit. Pharm. process for the estimation of quinine in Ferri et Quiniæ Citras frequently occasions some difficulty as regards the amount of washing required by the precipitated quinine. If the whole of the iron is to be removed, a loss of the alkaloid must occur to some extent, owing to its slight solubility in pure water. The following modification has been found to give more accurate results.

Five grams of the citrate are to be taken ; dissolve it in 50 cc. of water, add a slight excess of dilute ammonia (0.960), stir well, and after allowing to stand five minutes, pour on to a double filter, made of two filter-papers of open texture, tared on a balance, one against the other, by cutting down the heavier ; the smaller one to be placed outside to prevent the precipitate getting between the two. This dispenses with weighing and drying a filter, as both have the same solution passing through them and remain equal in weight. Instead of distilled water, the following solution is to be used for washing: 1 oz. of ammonia (0.880) is added to 80 oz. of distilled water. The precipitated and washed quinine from one drachm of the sulphate is added to the dilute ammoniacal solution and well shaken during twenty-four hours. As much as may be required is then filtered and used in an ordinary wash-bottle.

The precipitated quinine may now be freely washed with this solution ; no quinine will be lost, and if the precipitation has been properly performed, every trace of iron may be removed in from five to ten minutes, leaving the alkaloid white and granular. In this short time, any quinine deposited by evaporation of the washing solution would be so small that it may be neglected. Remove the filter from the funnel and thoroughly drain on bibulous paper for two or three hours. If the drying be commenced without this precaution, the water held by the precipitate will, on becoming hot, dissolve a portion of it. Dry at a temperature not exceeding 100° F. until constant in weight, the outside filter acting as a counterpoise.

Very accurate results have been obtained as above, known weights of quinine having been added to Ferri Citras, Ferri et Ammoniæ Citras, etc., and though it may appear an unnecessary complication of the B. P. process, it really requires less time when the solution is kept ready made up. The suggestion is simply an adaptation of Teschemacher's excellent method of estimating morphia in opium.—*Phar. J. and Trans.*, Feb. 15th, 1879.

Syrup of the Phosphates (Chemical Food).—The *Pharm. Jour.* (Jan. 25th, 1879) has a communication from a correspondent, who points out a way to obviate the occurrence of a precipitate in the finished syrup. He says: If one follows strictly the Philadelphia formula, excluding, however, hydrochloric acid, and using instead of it *citric acid* 1 ounce, the best possible results are obtained. The last-named acid prevents the occurrence of all ferruginous deposits, either on heating or standing. By no other means can satisfactory results be obtained. The cheapest form of tricalcic phosphate is bone char (animal charcoal), prepared for the sugar refineries, containing not more than 0.08% of iron. In round numbers it contains 75% of tricalcic phosphate. By weighing 125 per cent of bone char, calculated on the tricalcic phosphate wanted, dissolving in hydrochloric acid, etc., the proper amount of precipitate is obtained. The pure ferrous sulphate should be dissolved in cold, previously boiled, distilled water ; the sodium phosphate in well-boiled distilled water, the sodium acetate, ditto. The precipitate should be washed with well-boiled and boiling distilled water, keeping a continuous stream running on the filter till finished. The phosphoric acid should have a spec. grav. of not less than 1700. The respective solutions, on being mixed and boiled, will give no precipitate in presence of the citric acid. Without it, they always do. The precipitate is usually lost to the syrup, and most of the commercial Parrish's syrup should more properly be named "compound syrup of phosphoric acid."

Estimation of Mineral Oil or Paraffin Wax, when mixed with other Fats or Oils.—MR. W. THOMPSON proposes for this purpose a method which consists in saponifying the oils with an alcoholic solution of caustic soda, and separating the unsaponified oil or wax with petroleum spirit. 200 parts of the oil are placed in a basin with 350 parts of an alcoholic caustic soda solution (strength 9 per cent, Na_2O), and boiled until the mixture begins to froth. 200 parts of methylated spirits are added to dissolve the soap, etc., 90 parts of sodium bicarbonate to convert any caustic soda into carbonate, and finally 500 parts of washed and ignited mortar-sand. The mixture is boiled for a few minutes, and then the alcohol and water are distilled off from a water-bath. The residue, when cold, is transferred to a wide-mouth stoppered bottle, and shaken with petroleum spirit ; the sand and soap are allowed to settle, and the spirit containing the wax and mineral oil is drawn off and filtered through asbestos. The residue of sand and soap is thrown on to a cloth, and the liquid pressed out. The petroleum spirit is distilled from the mineral oil at 100°, and the residue is transferred to a flask, with a hole blown in the side, which is fitted with a cork bearing a thermometer and a small piece of glass-tubing ; the whole is previously weighed, and the last traces of spirit are distilled at 220° ; dry air is then blown through, and the whole is weighed.

Certain corrections have to be made, in consequence of oil capable of saponification containing small quantities of oil which cannot be saponified, and which are soluble in petroleum spirit. The correction in the case of Russian tallow amounts to .64 per cent.—*Chem. News*, 1878, 167.

Tupelo-Dilators or Tents.—(DR. HERM. HAGER.) The wood of the water-tupelo, *Nyssa aquatica* L. and *Nyssa biflora* Mich., growing along rivers and in swamps of North and South Carolina, is very light, yellowish-white, and has the property of absorbing much water in a short time, so as to increase in bulk several times. Of late the wood has been used to make tents, in the same manner and for the same purposes as those made from the laminaria. A tent of 4.75 cm. (=1⅞ inches) in length, and 0.8 cm. (⅜ inch) in thickness swelled up in water inside of half an hour to a length of 5 cm. (2 inches) and a thickness of 1.6 cm. (⅝ inch). The absorbed water amounts to about 5 times the weight of the *dry wood*.—*Pharm. Centralh.*, 1879, No. 6.

Experiments made with these tents in Switzerland have shown them to be much superior to sponge and sea-tangle tents, both of which are likely to be superseded by it.—*Schweiz. Wochensch. f. Pharm.*, 1879, No. 7.

Preparation of Hippuric Acid.—CAZENEUVE proposes a new method for preparing hippuric acid in a state of great purity by a simplified method.

Evaporate 1 litre of urine from carnivorous animals to $\frac{1}{10}$ its volume, add 200 gm. of gypsum and 20 gm. of alum, and evaporate the whole to dryness on the water bath. The addition of alum causes the elimination of much carbonic acid gas and at the same time sets free the hippuric acid. The dry residue is powdered, exhausted with warm ether, and on evaporation of the latter the acid is obtained almost completely white and pure.—*Journ. de Ph. et Ch.*, 1878, 323.

Sulphomethylate of Sodium.—MR. RABUTEAU has experimented with a new purgative, which is analogous to the sulphethylate (or sulphovinate) of sodium. It differs from the latter only in the fact that it contains the organic radical methyl, instead of ethyl. Methylic alcohol, or wood-spirit, is treated with sulphuric acid ; this produces sulphomethylic acid. The liquid is saturated with barium carbonate, by which the excess of sulphuric acid is precipitated as barium sulphate, while sulphomethylate of barium remains in solution. This

solution is then decomposed by sulphuric acid, which sets free the sulphomethylic acid, and throws the barium down as sulphate. The acid is then neutralized with soda. [Sulphate of sodium might be added at once, instead of sulphuric acid first and soda afterwards.—ED. N. R.] The salt produces painless and copious stools in doses of about 15 grams (ʒ ss). It is said not to be a very stable salt.—*La Ruche Pharm.*, 1879, No. 2.

To Detect Magenta, etc., in Wines, Fruit-Syrups, etc.—PROF. FLUECKIGER adds to portions of the sample, dilute if needed, recently prepared chlorine and bromine water. If genuine, the color with both reagents becomes a faint yellow. If magenta is present, chlorine produces a deep dirty tint, and bromine a violet color, followed in time by the formation of violet flocks. Neither reagent destroys the color. — *Chem. News* fr. *Les Mondes*.

Locust-Wood said to be Poisonous.—BOUCHÉ, of Berlin, announces that the wood of the locust tree, *Robinia Pseudacacia* L., has poisonous properties. The fine dust produced by turning pieces of the wood on a lathe causes diarrhœa. According to Prof. Ascherson, serious symptoms of poisoning were observed in some children who had accidentally chewed and eaten pieces of the roots of the tree.—*Industrie Blätter*, 1877, No. 2.

The active Principles of Sarracenia purpurea.—F. HETET has analyzed the American Pitcher-plant, and has found it in several proximate principles, particularly an alkaline substance, which has properties identical with those of *veratria*. It crystallizes in handsome prisms and in octohedra, and gives the same reactions as veratria [*S. purpurea* has been analyzed by several investigators but none of them have found any resemblance of the alkaloidal matter with veratria.]—*Rép. de Phar.*, 1879, 109.

Arseniate of Antimony.—(PATROUILLARD.) Antimonious chloride (protochloride of antimony, or butter of antimony) is soluble in glycerin without decomposition ; if to this be added a solution of sodium arseniate in glycerin, a precipitate is formed at first, which, however, redissolves on adding an excess of sodium arseniate. On now diluting the clear liquid with water, a white precipitate is thrown down, which, when washed and dried, exhibits the reactions of arsenic and of antimony. The author thinks it is a body of definite chemical composition, and not a mere mixture, and expects to be able soon to communicate the results of his investigation.—*Répert. de Pharm.*, 1879, 110.

To cover the Odor of Iodoform.—This is accomplished, according to Dr. Vulpius in Heidelberg, by adding to the solution or ointment containing iodoform some oil of peppermint, in the proportion of 1 or 2 drops for every 10 grams of the ointment, etc.—*Pharm. Zeit.*, 1879, No. 13.

Preparation of Ferrated Cod-liver Oil.—MR. A. DU BELL proposes to use lactate of iron for preparing ferrated cod-liver oil. Both the oleate and the benzoate of iron were formerly recommended, but the latter has, according to the author, the disadvantages of irritating the gastric membrane, even to vomiting [?], and of acquiring an odor of urine, probably caused by the urine-benzoic acid employed in making the ferric benzoate.

The author proposes the following process: Rub 1 gm. of crystallized ferric chloride ($Fe_2Cl_6.6H_2O$) with 200 gm. of pale cod-liver oil, and add to the mixture 2 gm. of concentrated lactic acid, which will cause in a few seconds a complete solution, being clear even before filtration, and possessing the color of ordinary cod-liver oil, while the taste is but little modified, being, if anything, improved. The proportion of lactate of iron produced depends on the amount of lactic acid added, and may be varied at will.—*Pharm. Zeit.*, 1879, No. 14.

In a subsequent number (No. 19) of the same journal, Mr. C. Bernbeck has a communication in which he states that he has tried the foregoing process, and that he found the resulting mixture—as might have been expected—to be a mere emulsion and not a solution.

Naphthalene has recently been used with success in the bronchial catarrh of old people, and is said to possess the advantage of alleviating cough without interfering with any other than the bronchial secretion. It appears to act as a stimulant expectorant. It is given in doses of one to two grains, either alone or combined with codeia.—*Pharm. Journ.*, Jan. 25th.

Japanese Aconite is gradually finding its way into retail commerce. Specimens received last week from Exeter were stated to have been sent out from a wholesale firm as ordinary rad. aconiti. It is necessary, therefore, to warn pharmacists that, since its relative strength has not yet been determined, nor even the identity of its alkaloids with those of *Aconitum Napellus*, it will not be safe to make any preparations for internal use from it. It appears to be even stronger than *A. Napellus*. It is easily recognized by its plump, scarcely shrivelled appearance, and white, very starchy fracture. So far as can be learned at present, the plant yielding it is the *A. Fischeri*, a plant fairly distinct from *A. Napellus*.—*Pharm. Journ.*, Jan. 25th.

Volatile Oil of Asarum Canadense.—In the United States the volatile oil of Asarum canadense is said to be now used to a considerable extent in perfumery for strengthening the odors of other perfumes. Its odor is compared to that of rhodium or sandal wood.—*Pharm. Journ.*, Jan. 25th.

The Banana.—(M. CORENWINDER.) The total sugar in this fruit when ripe and sound exceeds 20 per cent, three-fourths of which are crystallizable. When over-ripe the total sugar is reduced to from 16 to 14 per cent, whilst the non-crystallizable sugar rises to 11 or 12, thus not being merely relatively but positively increased.—*Comptes Rendus*.

Iridin and Euonymin.—(W. RUTHERFORD, M. VIGNAL, and W. J. DODDS.) The authors have published in the *British Medical Journal* an exhaustive paper on the action of certain cholagogues in animals, showing by diagrams the increase or decrease of bile-secretion, according to the quantity of the drug, etc., administered. They have also tried on the human body the effects of *euonymin* and *iridin*, and find that the action is the same as on the dog. They state, "As yet we have found four grains of *iridin*, made into a pill with confection of roses and taken at bedtime, a certain remedy for biliousness. It produces no disagreeable sensations, and on awaking in the morning the yellow tongue is found to be clean and the headache and malaise gone. As iridin, though a powerful hepatic, is not a powerful stimulant, it is well to give in the morning an ordinary mild saline aperient, such as Pullna water or some other. But, iridin though an agreeable remedy at the time, leaves a somewhat depressing effect ; and it probably should not be taken oftener than once a week or so.

"Euonymin is a hepatic stimulant in man as it is in the dog. Two grains of it, made into a pill with confection of roses and taken at night, seem to be as efficient a remedy as iridin. If the dose be not too great it leaves no depression. As it is a feeble intestinal stimulant, it is well to follow it in the morning by a dose of Pullna water or other saline aperient. I have been much struck with the success of euonymin in functional hepatic derangements in several persons who have tried nearly all the commonly used cholagogues with varying and limited success. I have no doubt that in consequence of our experiments, euonymin will come to be a universally employed hepatic stimulant." This expectation is already being realized, for numerous inquiries are already being made for euonymin at some of the wholesale houses.

Roche's Herbal Embrocation for the Whooping Cough (London).—Two to five grams asafœtida are digested for some hours with 60 grams olive oil ; the oil is decanted and mixed with oil of caraway and turpentine, of each 2 grammes ; bergamot oil, a few drops. 60 grammes, 4*s*.—*W. Müller*.

BIBLIOGRAPHY.

CALENDAR OF THE UNIVERSITY OF MICHIGAN for 1879, Ann Arbor: published by the University. 1879, 8vo, pp. 164.

THE announcement for the coming season in the School of Pharmacy gives the following requirements for admission: Applicants are admitted upon diplomas of graduation from graded high-schools, and upon certificates of good standing in higher educational institutions. Other applicants are admitted upon a written examination in the use of the English language. This examination will be held on the 24th day of September, 1879, at 9 A.M.

On and after September, 1880, applicants, who are not graduates of graded high-schools, or equivalent institutions, will be required to pass examination in the branches:

1. In the correct writing of English.
2. In arithmetic, and algebra through simple equations.
3. In Latin, amounting to one year's study, Jones's First Latin Book, or Harkness's Latin Reader, or an equl amount in other text-books.
4. Or, instead of 3, German to the extent of a year's study.

THE DISEASES OF LIVE STOCK and their most Efficient Remedies: including Horses, Cattle, Sheep and Swine. By LLOYD V. TELLOR, M.D. Philadelphia: D. G. Brinton. 1879, 8vo, pp. 469.

THIS is a popular treatise, and is rendered as plainly intelligible as the nature of the subject will permit. It appears to us that the work is much better adapted to the wants of farmers and the owners of stock than very many that have appeared, which may be explained by the author's statement that he has been engaged in the practice of medicine in a rural district, and has often been consulted regarding the maladies of domestic animals. This work represents not only his own experience, but also the study of all the best writings on veterinary medicine. No attempt whatever has been made to include statements or explanations adapted for scientifically educated readers, but an abundance of formulas and explicit directions for the cure of sick animals are given, and these, together with the handsome character in which the work is published, cannot fail to render it popular.

THE PRINCIPLES AND PRACTICE OF GYNECOLOGY. By THOMAS ADDIS EMMET, M.D., Surgeon to the Woman's Hospital of the State of New York, etc. With one hundred and thirty illustrations. Philadelphia: Henry C. Lea. 1879, 8vo, pp. 855.

THE advent of this important work has for some time been anxiously expected by all who are interested in the subject of gynecology, both here and abroad. Since his association with Dr. J. Marion Sims, the experience of Dr. Emmet in this branch of medicine has probably been equalled by very few surgeons, while his writings, with the exception of the volume on Vesico-Vaginal Fistula, published in 1868, have been limited to journal articles and papers read before various medical societies. In the mean time the clinics held at the Woman's Hospital, and the minor writings referred to, have acquired for Dr. Emmet a reputation for skill as an operator, and experience in the special branch to which he has exclusively confined his attention, which is probably unrivalled by any one on this continent. The anticipations which have been awakened regarding the character of this extended treatise, are not likely to be disappointed, if we may judge from the very cursory review we have made of its contents. With the exception of the illustrations of instruments, which have mostly been supplied by the manufacturers, nearly all are original. Sixty-two elaborate tables are scattered through the work, and give in a condensed form the results of recorded observations in thousands of cases. A sufficient number of cases are given in detail to illustrate the natural and abnormal courses of the affections under consideration, and throughout the work are to be found numerous practical and well considered observations of the character for which all such as emanate from the same source are well noted.

AN INTRODUCTION TO PATHOLOGY AND MORBID ANATOMY. By T. HENRY GREEN, M.D., Lond., etc. Third American, from the Fourth Revised and Enlarged English Edition, with one hundred and thirty-two illustrations. Philadelphia: Henry C. Lea. 1878, 8vo, pp. 331.

THE favorable opinion which we gave of a former edition of this work appears to have been quite justified by the short interval which has elapsed since it was issued, and the appearance of still another edition. We are very sure that no student, however limited his means, will regret the outlay for this book, and moreover, that there are many practitioners who would derive much profit and pleasure from its perusal. The illustrations are numerous, and of a character well calculated to aid in understanding the text.

ATLAS OF SKIN DISEASES. By LOUIS A. DUHRING, M.D., Professor of Skin Diseases in the Hospital of the University of Pennsylvania, etc. Part V. Philadelphia: J. B. Lippincott & Co. 1879.

ANOTHER fasciculus of these elegant plates with their accompanying text has come to hand, and embraces representations of Scabies, as it affects the hands and forearms; Herpes Zoster of the left inframammary region; Tinea Sycosis—the so-called "barbers' itch," a valuable plate to compare with the one of non-parasitic sycosis in a previous (II.) number, and Eczema (vesiculosum) of the right side and elbow. The plates are uniformly 8×10 inches in size (not including the margin), are taken from actual cases, and are everything that could be desired as regards accuracy of drawing and color.

Nothing superior to this work in the shape of an atlas has ever come to our notice, and we question very much whether it will ever be surpassed in excellence in our generation.

MEDICINAL PLANTS. Being Descriptions with Original Figures of the Principal Plants Employed in Medicine, and an Account of their Properties and Uses. By ROBERT BENTLEY, F.L.S., etc., and HENRY TRIMEN, M.B., F.L.S., etc. Philadelphia: Lindsay & Blakiston. 1878. $2.00 per part.

THE following is the contents of the parts of this serial which have latest come to hand:

PART 35.—36. *Hibiscus esculentus* (Okra); 66. *Vitis vinifera* (Grape-vine); 167. *Dichopsis Gutta* (Gutta percha); 184. *Menyanthes trifoliata* (Buck-bean); 206. *Salvia officinalis* (Sage); 278. *Methroxylon Sagu* (Sago palm), and 300. *Aspidum Filix-mas* (Male Fern).

PART 36.—105. *Rosa centifolia* (Cabbage Rose); 123. *Fœniculum capillaceum* (Fennel); *Erigeron Canadense* (Canada Fleabane); *Lactuca sativa* (Garden Lettuce); 215. *Rheum Rhaponticum* (English Rhubarb); 229. *Morus nigra* (Mulberry): and 294. *Triticum sativum* (Wheat).

MCKESSON & ROBBINS' PRICES CURRENT for 1879. 8vo, pp. 224. (Vol. II., No. 15, whole No. 75.)

THIS excellent and comprehensive list of wares has undergone considerable modification since the preceding edition, both as regards the text and the number and quality of illustrations.

EPITOME OF SKIN DISEASES, with Formulæ, for Students and Practitioners. By TILBURY FOX, M.D., F.R.C.P., and T. C. FOX, M.B., B.A., etc. Second American Edition, Enlarged and Revised by the Authors. Philadelphia: Henry C. Lea. 1879, 8vo, pp. 216. $1.00.

THIS new edition of a popular work has been increased to about three times its original size by the addition of newly written materials, including the classification recently adopted by the American Dermatological Association.

LECTURE NOTES ON CHEMICAL PHYSIOLOGY AND PATHOLOGY. By VICTOR C. VAUGHAN, M.D., PH.D. Second Edition, Revised and Enlarged. Ann Arbor: 1879, 8vo, pp. 315.

THE thorough manner in which chemistry is taught in the University of Michigan, where the author is a lecturer on this branch, is well known, and is a guaranty that the work here noticed has had a good practical experience in the needs of students to guide its construction. It is not long since the first edition appeared, and the interval has been improved by arranging materials for its enlargement to the present form. The author promises to issue soon, plates representing the most important crystalline substances and adapted to be used in connection with this volume.

RINGWORM IN PUBLIC INSTITUTIONS.—ROSACEA: Two Papers, by JOHN SHOEMAKER, A.M., M.D. Philadelphia: 1878, 8vo, pp. 16.

"RINGWORM," especially of the scalp, may sometimes be a troublesome affair to handle in an individual and isolated case, but when epidemic in an institution where many children are crowded together, one meets with many complications and drawbacks. This paper will prove interesting, therefore, as an account of such an occurrence.

NAVAL HYGIENE. Human Health and the Means of Preventing Disease, with illustrations. Incidents principally derived from Naval Experience, by JOSEPH WILSON, M.D., Medical Director U. S. Navy. Second Edition, with Colored Lithographs, etc. Philadelphia: Lindsay & Blakiston. 1879, 8vo, pp. 274.

IT is a hard matter to say just what kind of a book this should be called, beyond the statement that it is an interesting and instructive one. It has evidently been written by a man of considerable experience, decided views, and no very great familiarity with the literature of the subject treated of—in which respects it differs essentially from very many books made in these days, whose writers are familiar with the literature of their subjects, have no very clear views of anything, and have had no experience worth mentioning. This book might have been called by any one of a number of names quite as appropriately as by the one which it bears, and would have proven none the less interesting and suggestive.

PROPOSED LEGISLATION ON THE ADULTERATION OF FOOD AND MEDICINE. By EDWARD R. SQUIBB, of Brooklyn. New York: G. P. Putnam's Sons, 182 Fifth Avenue. 1879, pp. 57.

THESE publishers have issued Dr. Squibb's draft for a law (published by us as a supplement to our March number) as the XIV. volume in a series of Economic Monographs. Besides the original paper as presented at the Medical Society of the State of New York, Dr. Squibb has added answers to various comments made by the press; a copy of the British "Sales of Food and Drugs Act of 1875," and illustrations of the difficulties which have been met with in its administration. We shall print elsewhere extracts from these supplementary items.

CHEMISTRY: GENERAL, MEDICAL, AND PHARMACEUTICAL, including the Chemistry of the U. S. Pharmacopœia. By JOHN ATTFIED, PH.D., M.D. A Manual of the General Principles of the Science, and their Application to Medicine and Pharmacy. Eighth edition, revised by the author. With illustrations. Philadelphia: Henry C. Lea. Royal 12mo, 700 pp., cloth, $2.50; leather, $3.00.

WE noticed only about two and a half years ago the publication of the preceding edition, and remarked upon the exceptionally valuable character of the work. The author calls attention to the following facts as characteristic of this eighth edition: Alterations and additions which seemed necessary to keep pace with the latest development of chemical principles and the latest applications of chemistry to pharmacy, the extent of these additions being represented somewhat by three hundred new references in the index. The work now includes the whole of the Chemistry of the Pharmacopœias of the United States, Great Britain, and India.

A TREATISE ON THE DISEASES OF INFANCY AND CHILDHOOD. By J. LEWIS SMITH, M.D., Clinical Professor of Diseases of Children in Bellevue Hospital Medical College. Fourth Edition, thoroughly revised. With Illustrations. Philadelphia: Henry C. Lea. 1879, 8vo, pp. 758.

THERE is probably no better text-book published in this country relating to the affections of Infancy and Childhood than this one by Dr. Smith, and with the careful revision which it has just received, it would not be easy to surpass it as a work suited to the general needs of practitioners.

SCIENCE NEWS: A semi-monthly edited by ERNEST INGERSOLL and WM. C. WYCKOFF of New York, 44 Howard St. Published by S. C. Casino, Salem, Mass. 16 pp. 8vo, $2.00 per year.

THE three earlier numbers of this periodical which have come to hand give us a favorable opinion of its merits as a means of interchange of information among naturalists.

A MANUAL FOR THE PRACTICE OF SURGERY. By THOMAS BRYANT, F.R.C.S. With 672 illustrations. Second American from the Third Revised and Enlarged English Edition. Philadelphia: Henry C. Lea. 1879, royal 8vo, pp. 945.

IN this new and enlarged edition of Mr. Bryant's Manual we have one of the most complete treatises on the subject which has appeared in one volume. Indeed, the English edition is in two volumes, and to condense it to its present limits the American publisher has been obliged to make the volume of the proportions of "Gray's Anatomy," and use a medium-sized type. Much attention has been given to the description and illustration of methods of operating and subsequent management, apparatuses, and results, and the introductory chapters on minor topics, which are commonly slighted, are quite full and satisfactory. Although the type, as we have intimated, is not large, it is clear, and the illustrations, which are abundant, are well chosen, and, in many instances, entirely original with this work.

THE PRINCIPLES AND PRACTICE OF SURGERY. By JOHN ASHHURST, JR., M.D., etc. Second Edition. Enlarged and thoroughly revised. With 542 Illustrations. Philadelphia: Henry C. Lea. 1879, royal 8vo, pp. 1040.

THIS work certainly shows an extensive familiarity of its author with the current literature of the subjects embraced, for we find throughout abundant references to articles which have appeared very recently in the journals from American writers, and in this respect there is a notable difference between it and most other surgical treatises which have appeared of late in this country. Throughout the text there is to be found a vein of individuality and an evidence of appreciation on the part of its author of the salient points of his subjects which will render the book suggestive and valuable even to one who has other treatises of the same nature.

ARCHIVES OF MEDICINE: A Bi-Monthly Journal, Edited by E. C. SEGUIN, M.D. 8vo, pp. 112.

THIS is intended to be a continuation of the "*Archives of Scientific and Practical Medicine*" which for a short time was edited by Dr. C. E. Brown-Sequard and E. C. Seguin, and of the series of "*American Clinical Lectures*" which were subsequently edited by the latter. Drs. T. A. McBride, M. D. Mann, and L. A. Stimpson are to serve as assistant editors, and the Putnams are to be the publishers, at 182 Fifth Avenue. The subscription price is $3.00 per year or 60 cents per number. The first number which has come to hand is very creditable to both editors and publishers, and contains among others papers by Dr. Mary Putnam-Jacobi on the Effects of Quinia upon the Cerebral Circulation, and a brief summary by Dr. Andrew H. Smith of the work of the N. Y. Therapeutical Society during its first year of existence.

NEW BOOKS.

Botany and Materia Medica.

Baillon (H.). The History of Plants. Vol. 5. Roy. 8vo, pp. 508. London (L. Reeve). 25*s.*

Donde (J.). Calendario botanico de Merida y sus alrededores formado con aigunas de las plantas que florecean durante el mes de Diciembre. Emulacion, Merida, 1879, III, 236.

Gærtner (R., publisher in Berlin). Anatomischer Atlas zur pharmaceutischen Waarenkunde. Berlin, 1879, 50 lithogr. plates, published in 8 parts, each at 2.75 marks.

Lanessan (J. L. de). Manuel de l'Histoire naturelle médicale. I., 430 ill. 12mo, Paris. Price of both parts, 14 francs.

Chemistry and Pharmacy.

Blyth (A. Wynter). A Manual of Practical Chemistry. The Analysis of Foods and the Detection of Poisons. 8vo, London, 1879.

Carl (Friedrich). Chemischer Kalender für das Jahr 1879. 12mo, Erlangen. 2.50 marks.

Fleck (Dr. Hugo). Die Fabrikation chemischer Producte aus thierischen Abfällen. 2te Aufl. 45 illustr. 8vo, Braunschweig. 3 marks 20 d.

Griffiths (W. Handsel). Materia Medica and Pharmacy, for use of medical and pharmaceutical students preparing for examination. Edited and in part rewritten by George F. Duffy. Dublin, 1879, 12mo.

Hirzel (Prof. Dr. H.). Die Toiletten-Chemie. 3te Aufl., illustr., 8vo, Leipzig. 8 marks.

King (Dr. John). Urological Dictionary. Illustr., 8vo, Cincinnati.

Kingzett (Charles Thos.). Animal Chemistry, or the Relations of Chemistry to Physiology and Pathology. A Manual for Medical Men and Scientific Chemists. 8vo, Lond., pp. 494. 18*s.*

Kolbe (Prof. H.). Die chemische Synthese. Ein chemischer Traum. (Reprint from *Journ. of prakt. Chem.*) 8vo, Leipzig, pp. 26. $0.25.

Lock (Alfred C. and Charles G.). A practical Treatise on the Manufacture of Sulphuric Acid. With 77 Construction Plates, drawn to Scale, and other Illustrations. Roy. 8vo, London (Low). 52*s.* 6*d.*

Therapeutics.

Bain (Joseph). De la Coca de Pérou et de ses préparations; faits relatifs à son action physiologique et thérapeutique. Paris, 1879, 12mo.

Bernatzik (W.). Handbuch der allgemeinen und speciellen Arzneiverordnungslehre. 2 Theil: specielle Arzneiverordnungslehre (Dosologie). Wien, 1878, W. Braumüller. 456 pp. 8vo.

Binz (C.). Grundzüge der Arzneimittellehre. 6te Aufl., 8vo, Berlin, pp. 288. $2.20.

Gimeno y Catañas (Amalio). Tratado elemental de terapéutica, materia médica y arte de recetar. V. I. Valencia, 1879, 8vo.

Miscellaneous.

Cooley. Cyclopædia of Practical Receipts. New edition, entirely rewritten. 2 vols., 800 pp. each.

Encyclopædie der Naturwissenschaften. Herausg. v. Jaeger, Kenngott, Ladenburg, v. Oppolzer, Schenk, Schlömilch, Wittstein, v. Zech. 8vo. To be published in about 90 numbers, at $1.10 each.

Garnier (P.). Dictionnaire annuel des Progrès des Sciences et Institutions Médicales. 14me année. Paris, 1878 (G. Baillière). 7 fr.

Hoblyn (Rich. D.). A Dictionary of Terms Used in Medicine and the Collateral Sciences. 10th ed., 12mo, pp. 730. London. 12*s.* 6*d.*

Karmarsch (Karl). Technological Dictionary in Three Languages: German, French, and English. In three volumes, each of which is a reverse dictionary of the others. 8vo. Wiesbaden, 1878. Each volume 10 mark.

Street's Indian and Colonial Mercantile Directory for 1878–79. 8vo. London, G. Street & Co. 20*s.*

NOVELTIES.

Force's Patent Graduated Medicine-Spoon.

THE adjoining illustration shows one feature of a handsome silver-plated medicine-spoon, for which J. T. Webber & Co., of Springfield, Mass., are the agents. This feature consists in a top which is securely fastened to the upper edge of an ordinary spoon and serves to prevent its contents being spilled in giving fluids of any description to infants or recumbent invalids. On the inside of the spoon are two lines engraved in the metal, and indicating, respectively, half a drachm and a drachm, so that by the use of this appliance some degree of accuracy can be arrived at in the administration of remedies, a thing which is greatly needed and which receives far less attention from physicians than it deserves.

The Belgravia Cologne.

THIS toilet water has but recently been introduced in this country by the Wexford Company, Perfumers, of this city, who claim that it has met with deserved popularity abroad. The style in which it is put up is certainly attractive, and the cologne itself is refreshingly fragrant. The odor left after evaporation of the alcohol is spicy and agreeable, and not, as sometimes is the case, rather unsatisfactory as compared with the first odor.

Seabury & Johnson's Plasters.

THE name of this house has become so well known, both here and abroad, for the exceptional excellence of the plasters of all kinds made by it, that there would appear to be hardly an occasion for referring to their goods. A few of the more recently introduced varieties have lately come to our notice, and it will perhaps be of interest if we mention them in this connection. The Mustard Plaster, spread on cotton cloth, is free from some faults common to prepared sinapisms; one being the quality of the material used and the freedom from liability to crumble in either a wet or dry state. The Salicylated Surgeon's Adhesive Plaster needs neither heat nor moisture to cause it to adhere, while the presence of the antiseptic element makes it especially desirable in many instances. In the line of anodyne plasters, aconite, belladonna, assafœtida, ammoniacal, and opium are provided; a counter-irritant effect can be had in any degree, from that caused by strengthening and poor-man's plasters up through warming, pitch, capsicum, and mustard to cantharides; among medicinal plasters of other sorts, lead mercurial, iron, arnica, carbolated, galbanum, etc., are offered; while simple adhesiveness is obtained in the different varieties of court plasters, isinglass plaster, and the surgeon's rubber adhesive above referred to.

Germain to the latter of these, we remember to have seen quite recently a mode of uniting the edges of incised wounds introduced by a Western surgeon, who made use of these perforated plasters by placing a strip on either side of the wound, and then lacing them together by means of a string passed through the holes.

New Fluid Extracts.

FROM HENRY THAYER & CO., of Cambridgeport, Mass., we have received samples of fluid extracts of Jaborandi, Yerba santa (*Eryodictyon glutinosum*) and *Cactus grandiflorus*. The properties of the first are well known. Regarding the second, there is yet some question about

its therapeutic value; and the third, excepting among homœopathic physicians, is but little known. It is not unreasonable to presume that the lack of success which has followed the use of Yerba Santa in some cases may have been due to an inefficient preparation of the drug, and we are well aware that preparations of the Cactus are to be had in the market which, instead of being derived from flowers and young shoots, are made from the entire plant and contain large quantities of chlorophyll.

In the case of these here referred to, we can find nothing objectionable, and feel warranted in recommending them as reliable preparations for those who may wish to try therapeutical experiments.

Elixir of Rhamnus Frangula.

THE elixir made by the above-named manufacturers has been tried by us, and has proved to be active in the average doses employed. In some cases where aloes cause griping in spite of combination with sulphate of iron and hyoscyamus, where castor-oil is too offensive, where saline purgatives are too debilitating, and the effects of rhubarb too constipating, we have been well suited with this remedy.

Infants' Food.

THE food recommended by Professor Liebig has been the basis for a very large number of these preparations under as many names, and although explicit directions were given by the late Professor for its preparation, we have found that, simple as the process appeared to be, the attempt to prepare it in the house has led to about as many failures as successes. When properly made and used, it has proved an excellent substitute for natural feeding in many cases. When prepared on a large scale and with the aid of skilled labor, there is no reason why this food should not be uniformly good. In the form offered by Messrs. Thayer & Co. it has been rendered granular—which is favorable for its preservation—and it is sufficiently agreeable in taste to be eaten out of hand.

Granulated Extract of Malt.

ANOTHER of Henry Thayer & Co.'s preparations is a granulated extract of malt. Its portability and the readiness with which it can be dissolved in any medium—water, milk, or wine, as well as its good quality, are features which strongly recommend it.

Fairchild's Malt Jelly.

STILL another variation in the mode of preparing malt extract has lately come to hand from the Fairchild Bros., who have recently opened a business as chemists and druggists at No. 60 Fulton st. Among several preparations of this sort, we have especially noticed a jelly of malt extract alone, having a flavor of orange juice, and one of malt extract and cod-liver oil, in which the taste of the latter is largely covered with a flavor of peach-kernels. Both are notable additions to "elegant pharmacy" and are worthy of a trial.

Both are put up in jelly glasses with glass covers, and carefully packed in pasteboard boxes.

Maltine.

BY no means the latest of these malt preparations nor the least worthy is the "Maltine" manufactured in great variety of combinations by Reed & Carnrick. The samples received include those containing hops, wine, iron, cod-liver oil, and Yerba santa, and each appears to have distinctive merits independent of the tonic and digestive properties of its basis.

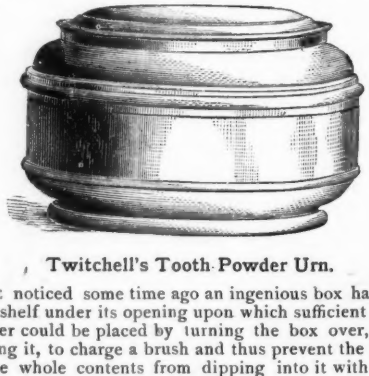
Médicaments Assimilables Diastasés.

ONE would think that in the list of preparations of malt to which we have above and on other occasions called attention, the ingenuity of manufacturing pharmacists would have been quite exhausted, but here we have a competitor in somewhat different shape.

It is considered that one of the most important elements of malt extract is the diastase, a peculiar organic body developed in barley and other cereals and seeds during the process of germination. It is this substance which, when the process of germination has been stopped by raising the temperature of the grains and by grinding and "mashing," converts the starch of the grain into glucose and fits it, in the manufacture of ale or spirits, for the process of *vinous* fermentation, whereby the glucose is broken up and converted into alcohol and carbonic acid, or when *acetous* fermentation is induced, into acetic acid.

Now the value of malt extract therapeutically lies partly in the fact that, when prepared at proper temperature, much of its diastase remains active and, when taken into the stomach, serves to take the place of saliva and pancreatin in their function of converting hydrated starch into glucose. Baron Liebig took advantage of this property in the preparation of his infants' food; the diastase of the malt flour serving to effect this change, not only in the starch-grains of the barley, but likewise in the wheat flour used as well.

Now comes Dr. V. Baud, of Paris, who takes cress seeds, and by germination develops in them diastase of "the most energetic" character. During this process they are moistened with standard solutions of citrate of iron, iodide of potassium, or arseniate of soda, as the case may be. When they have arrived at the proper stage, the seeds are raised to a temperature sufficient to dry them without destroying their active organic principles, and they are then coated with sugar and gum. We now have a sort of medical confectionery constructed and compounded on the most scientific principles, and any patient needing an alterative or ferruginous tonic who would fail to respond with celerity to such an agent must be incorrigible indeed, and not worthy of the efforts of the scientific physician of the present day.



Twitchell's Tooth Powder Urn.

WE noticed some time ago an ingenious box having a little shelf under its opening upon which sufficient tooth-powder could be placed by turning the box over, or by shaking it, to charge a brush and thus prevent the caking of the whole contents from dipping into it with a wet brush. The same manufacturer has now introduced a still more elegant and somewhat more capacious vessel made of glass and provided with a metal cover and shelf, which is offered to the trade at very advantageous terms, and makes a very desirable toilet article.

The London Manufacturing Company's Essences of Meats.

THE claims made by manufacturers of many "beef extracts" are so numerous and comprehensive that we have been in no particular haste to add our comments to the number that have already been made by others upon the merits of the "meat essences" prepared by this company, and it is only after an actual trial of them that we at last have concluded to do so. Samples having kindly been placed at our disposal, we have had an opportunity to notice that, in the majority of instances, they have proved agreeable and serviceable. To judge by the flavor and

appearance of the essences, they correspond to the gravies developed in meats by careful roasting, and it is well understood that in this way of cooking there are developed empyreumatic substances which act, when taken into the system, somewhat like stimulants, and when lost through over-cooking or faulty management in other ways, the wholesomeness and digestibility of meats are correspondingly impaired. An objection which has been raised to some of the meat-extracts is the large amount of potassium salts which they contain, and which by their presence render the preparations not only less savory and appetizing, but when taken in any considerable quantity are positively harmful. In the essences here referred to this appears to be quite avoided, and we have found that by taking them, patients have sometimes had their appetite for other foods rather improved than otherwise. It is certainly true and a fact worthy of the prominence given to them in the circulars accompanying the packages, that these essences are tolerated and retained in the stomach when many other forms of nourishment are rejected, and it is likewise deserving of notice that little or no preparation or manipulation is required to adapt them for use. Indeed, if they resemble a meat gravy in their composition, as we have presumed; their admixture with any fluid, such as wine, water, or milk, would be likely to injure them, and we have found that the most satisfactory way of giving them is to follow the direction furnished, viz.: to render them gelatinous by cold, and then spread them on a soft cracker.

The Quaker Tooth Brush.

THIS is a new style of the "Perfection tooth-brushes," for which Theodore Ricksecker, of 146 William st., New York, is agent, and consists of a plain, straight bone handle of uniform thickness and width, without pretention to ornamentation, but substantial in every respect.

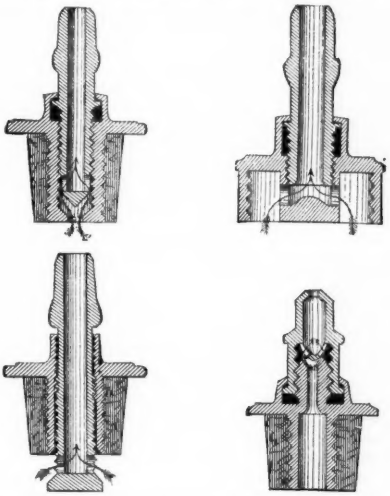
Feeding Tube for Invalids.

ANOTHER of the novelties in druggists' sundries for which Mr. Ricksecker is the

agent, is a rubber siphon-tube for giving fluid food and beverages to invalids. It consists, as here shown, of a metal clip for attachment to the edge of a glass or bowl, having a bent glass tube passing through a ferrule in its top; to either end of the glass tube are attached sections of rubber tubing, a short one to dip into the contents of the glass and a long one with a glass mouth-piece through which to make suction. A fine bristle brush for cleaning the glass tube is packed with it in a pasteboard box.

Newton's Patent Sprinklers.

AMONG the small articles which have lately come into use among druggists and perfumers, there are few things which have proved to be more convenient than the metal sprinkler-tops and powder-tubes for bottles. In many ways they are taking the place of glass-stoppers, since they are not so liable to be broken or lost, nor are they so wasteful of the contents of the bottle. Those who use tooth-powder find in their use a simple and effectual mode of holding or distributing the powder. Their expense is



moderate and their mechanism simple. S. S. Newton & Co., of Binghamton, N. Y., are among the oldest and most successful makers of these articles which are produced in great variety as regards size and mechanism. The adjoining sectional illustrations show the ingenious manner in which some of the stoppers are made so as to offer a free delivery without the necessity for removing the cap or risk of losing it. The arrows show the direction taken by the contents of the bottle in escaping.

The "Stilligoutte" Sprinkler-Stopper.

ANOTHER stopper recently introduced by Freeman D. Marckwald, of 63 Pearl street, is known by this title, and is very well illustrated in the adjoining figure. The cap is raised or lowered by means of a screw on the tube projecting above the stopper, but cannot be entirely removed. Turning the cap from left to right opens the end of the tube, and turning in a reverse direction presses that portion of the cap shown between the kidney-shaped holes in its top, down upon the opening in the tube until it is entirely closed. Six sizes are in the market; from 0 to 5, the one here shown being No. 2. The workmanship is good and the mechanism seems to be efficient and durable.

Preserving Grapes.—Travellers say that the Chinese have a method of preserving grapes so as to have them at command during the entire year by cutting a circular piece out of a ripe pumpkin, or gourd, making an aperture large enough to admit the hand. The interior is then completely cleaned out, the ripe grapes are placed inside, and the cover replaced and pressed in firmly. The pumpkins are then kept in a cool place, and the grapes will be found to retain their freshness for a very long time.

CORRESPONDENCE.

CONCERNING THE DESIRABILITY OF LEGAL MEASURES TO PREVENT ADULTERATION OF FOOD AND MEDICINE.

SOONER or later there will be active laws to prevent adulterations in foods and medicines in the United States, and this proposition of Dr. Squibb will have a decided historical interest in some time to come, whether it reaches enactment this year or not. The United States ought not to be left far behind in the maintenance of purity in foods and medicines. If the proposed plan could be fairly filled out and enacted, and, if enlightened public opinion and definite professional opinion were to sustain it, the State adopting it would possess, it seems to me, the best system in the world to secure open dealing in the commodities of life. Now, what is to hinder? If there is less strength of unchallenged law in this country than in Europe, there ought to be greater strength of enlightened public opinion in support of measures for the benefit of the people. When the people and the legislature come to understand the matter of adulterations, they can accomplish sanitary and commercial regulations with something of the success of the public school system and other State institutions which give credit to our nation.

Public sentiment, and even professional sentiment, need to become more definite and reasonable about adulterations. There is a stir now and then in fitful gusts, but the air is thin. This law that Dr. Squibb would send forth is no fledgeling, it is full-wing, but it must have some sort of air to fly in. There was a stir in England thirty years ago about strychnine in beer and other distorted images. "Hassall's Adulterations" came of it, also the British law of 1860. This law was aimed against adulterations, if intentional and very harmful; a weak attempt to prevent malicious poisoning, left to be executed by philanthropy; a law remembered because it had to be repealed for the law of 1872. Sensational alarms divert the public attention from the real work to be done. It is to be hoped that no chemist will ever again mention to a reporter of the daily press that it has been stated that milk might be adulterated with sheep's brains. But let it be urged that the milk-man who sells one-fourth water under the name of milk, be dealt with on the same principle as he who would charge one hundred quarts in the account for seventy-five quarts furnished. The sale of ground barley and chicory under the declaration of coffee, is as truly an offence as the passing of counterfeit coin, and the healthfulness of coffee has nothing to do with it. A firm selling fluid extracts of ten troy ounces of drug to the pint should surely be exposed, and as readily as a grocer who should deliver ten avoidupois ounces of sugar for a pound. Some responsibility should be imposed upon venders of food and medicine. Trade names that fairly deny the composition of the articles sold under them, vitiate commerce, degrade character, and insult the law.

But, if the prevention of adulteration is one of the most obvious duties of the State, it is one of the most difficult. Having the benefit of the experience in England, and of the advance in the efficiency of analysis since England began it, our States ought to succeed as well, and with less of blunder and contradiction. There must be the very best official service—with both practical scientific training and sound commercial sense—in order to get on in the matter. Moreover, any execution of a law against adulteration is a powerful stimulus to analytical studies.

Those who would be moving to expose adulterations all over the United States look hopefully now to this good effort in the Empire State. ALBERT B. PRESCOTT.

ANN ARBOR, MICH., March 13th, 1879.

I AM pleased to see in your journal the interest you manifest in regard to the enactment of laws to prevent adulteration of medicine and food, which has been a thing uppermost in my mind for years past, though how to bring about a successful remedy has been and is still my great trouble, since it cannot be done otherwise than by legislative action, which in these days of political debauchery is almost hopeless. Several years ago I endeavored to solicit the help or interest of druggists in this city and throughout this State, wishing to break down the vending of spurious, inert, or worthless medicines and condiments. To my surprise I found very few to support my views, most of them declining, either for want of integrity or ability (I hardly know which); their answer invariably was, "good enough," while I am convinced drugs and medicines usually kept in stores are not too good at best, much less good enough. I therefore emphatically say "good enough" means good for nothing. A person may buy poor or second-rate clothing, furniture, etc., but medicinal agents should not be burdensome or injurious to the human machine, especially since those requisite functions are not made of diamond or steel. Thus I found more *haberdashers* in the *drug* business than I had any idea of; all the requirement they appear to appreciate is the getting of a diploma, and upon it hang all their present and future prospects.

As an old druggist and salesman, I have often tried to sell those fellows Dr. Squibb's chemicals, etc., but find their cry "too dear, too dear." Many hardly know that there are such, at least so they pretend.

Seeing the futility of my efforts with the pharmaceutical men, I next turned my attention to the physicians, asking them to bring up the matter in their County and State meetings, so as to frame a memorial to the Legislature of our State, asking that body to pass necessary laws. I urged upon the doctors the importance that upon the quality of their medicines depends their success. I even attended one of their State Medical Conventions, at Pottsville, held a few years ago, in order to bring these matters before them, but their time being limited, they did not act on the subject.

My last move was to beg legislation through a member of the Legislature (a physician). I then sent a crude bill (of which I have a copy, and if you or friend Squibb desire it I can forward it to either); there was nothing satisfactory done, nor will there be until a change of sentiment in favor of integrity and ability in proper official power from men who are willing to frame and execute good and wholesome laws without fear or hope of favor.

I am glad to observe this omen for good looming up, I hope in the near future, and that there are kindred minds from whom I expect regenerating influence.

Hoping that you in your valuable journal will keep alive this subject, agitating it much so that good may speedily result, I am respectfully,

AN OLD DRUGGIST.

PHILADELPHIA, PA., March 14th, 1879.

Massachusetts College of Pharmacy.

THE annual meeting of the Massachusetts College of Pharmacy was held on March 8th, 1879. The following officers were elected:

Thomas L. Jenks, M.D., *President;* B. F. Stacey, *First Vice-President;* A. R. Bayley, *Second Vice-President;* Thomas Doliber, Ph.G., *Recording Secretary;* Prof. G. F. H. Markoe, Ph.G., *Corresponding Secretary;* Charles I. Eaton, *Treasurer;* James S. Melvin, *Auditor. Trustees:* Henry Canning, Sec.; George H. Cowdin, Ph.G., Edward S. Kelly, Ph.G., Charles P. Orne, Ph.G., S. A. D. Sheppard, Ph.G., Charles A. Tufts, M.D., Ph.G., I. Bartlett Patten, Daniel G. Wilkins.

The College introduced three new features the past year: *First.*—Compulsory and Free Laboratory Exercise, in connection with the new Chemical Laboratory. This was opened last autumn, and will accommodate 256 students. *Second.*—A Junior Examination in October for those students who failed to pass the regular Junior Examination in the spring. *Third.*—A Preliminary Examination in Reading, Writing, Spelling, and Arithmetic,

as far as and including Fractions and Proportion. This Preliminary Examination was announced in the College Catalogue of 1877–8, as follows:

Following are the questions used at this Preliminary Examination.

Arithmetic.—1. If 139 grains of sulphate of iron contain 28 grains of iron, how much iron is contained in 340 grains of sulphate of iron?

2. Add column of figures.

3. Write in figures: forty-one and four-tenths; four hundred and sixty-five ten-thousandths; six and sixteen thousandths; six and sixteen hundredths; twelve and twenty thousand and eight hundred thousandths; and add them together.

4. Repeat tables of Apothecaries' weight; Troy weight; Avoirdupois weight; Metric measure (liquid); Metric measure (length).

5. Add together $\frac{1}{3}$, $\frac{1}{10}$, $\frac{2}{10}$.

6. From $\frac{1}{3}$ subtract $\frac{2}{16}$.

7. Multiply $6\frac{1}{4}$ by $\frac{2}{3}$.

8. Multiply four hundred and nineteen ten-thousandths by twenty-nine thousandths.

9. Divide three and two hundred and sixty-four thousandths by eight hundredths.

10. Reduce 14 pints, 8 fl. oz., 6 fl. dm., and 15 ℥ to ℥.

11. Add together 1 pt., 4 fl. oz., 2 fl. dm., 3 fl. oz., 2 fl. dm., 4 fl. oz., 6 fl. dm., 8 fl. oz., 7 fl. dm.; 1 pt., 10 fl. oz., 7 fl. dm.

12. Divide 4 pints into 3 equal parts.

13. Which is heavier, a troy ounce, or an avoirdupois ounce, and how much per cent is it heavier?

14. On a certain day A's sales are $42.61; B's, $39.60; C's, $26.78; D's, $8.41; E's, $14.20. What is the percentage of each? (2 places of decimals.)

Spelling.—List of words to be spelled.

Proceed, College, Deliquescent, Concede, Knowledge, Capacious, Supersede, Distil, Crystallize, Viscid.

List of words to be spelled by those acquainted with the business.

Synthesis, Glacial, Avoirdupois, Pomegranate, Taraxacum, Creasote, Calisaya, Ipecacuanha, Pharmacopœia, Glycyrrhiza.

Latin.—Although Latin was not included in the examination schedule set forth by the Board of Trustees, still those applicants who had studied Latin were invited to render the following English into Latin:

Balsam of Tolu, Tincture of Tolu, Syrup of Tolu, Tincture of Nux Vomica, Tincture of Cantharides, Conium Seed, Tincture of Conium Seed, One ounce of Mucilage.

Reading and Writing.—The examination in reading was conducted by allowing the candidate to read from any convenient book; and a scrutiny of his manner of performing his work in spelling and arithmetic constituted his examination in writing.

The School of Pharmacy has been attended the present session by 114 students. The school suffered a great loss in the death of Professor Merrick, which took place on the 25th of February of this year. Prof. Merrick had filled the chair of chemistry for five years. The College at this meeting voted a change in its by-laws, whereby wholesale druggists and manufacturers of pharmaceutical preparations can become members.

The retiring President, Mr. Sheppard, read an address detailing the events of the past year in reference to the College, which contained many valuable suggestions for its future welfare.

THOMAS DOLIBER, *Rec. Sec.*

The Adulteration of Annatto, which every one knows is largely used for coloring butter, has formed the subject of a trial at Northwich, England, under the Sale of Foods and Drugs Act. The adulterator got off because the public analyst found it impossible to prove that annatto was either a food or a drug, and the magistrates, therefore, dismissed the case.—*The Medical Press and Circular.*

ALKALOIDS: THEIR SEPARATION AND IDENTIFICATION.

BY HENRY B. PARSONS.

ALKALOIDS are organic compounds containing nitrogen, which can form definite salts with acids. Many of them are strong bases, having a decided alkaline reaction with litmus, and producing marked physiological effects when administered as medicines. Others, like caffeina and narcotina, are weak bases, form instable salts with even the mineral acids, and often seem to have correspondingly less medicinal activity. Alkaloids are usually divided into two classes, the volatile, and the fixed or non-volatile. Volatile alkaloids are liquids, of oily appearance, sharp odor, alkaline reaction, and powerfully poisonous effects. As a general thing, they contain only carbon, hydrogen, and nitrogen; they are either of animal or vegetable origin, and exist in small proportion in the substances from which they are extracted. Of volatile alkaloids, nicotia from tobacco and conia from seeds of hemlock, are familiar examples. Non-volatile alkaloids contain carbon, hydrogen, oxygen, and nitrogen, are solids at ordinary temperatures, may, some of them, be sublimed unchanged, are crystallizable or amorphous, white or yellow, and, almost without exception, of a bitter taste. They are neutral or alkaline in reaction, of animal or vegetable origin, and of widely different medicinal applicability.

The pharmacist has most to do with alkaloids of vegetable origin. The number which he sells in the free state is much less than the number dispensed in solid and fluid extracts, tinctures, and various preparations and forms of crude drugs. It sometimes happens that he is called upon to decide whether some mixture sold as medicine has had added to it, by accident or design, anything of a poisonous nature. It is necessary to make careful search for alkaloids in such cases, and as their separation, in a form sufficiently pure to be tested, is a matter of some difficulty, the following methods are proposed as a partial solution of the question.

It must be remembered that alkaloids exist in vegetable substances either free or in combination with some acid; hence the method of separation must depend upon the state in which the alkaloid exists in the substance tested. Reference must also be had to the other substances present.

I. *Separation from Fluid Extracts and Tinctures.*

Evaporate the alcohol, add water and just enough sulphuric acid to give a distinct acid reaction. Filter out any separated resinous and coloring matters. If the filtrate is turbid or colored, add to it a slight excess of potassic carbonate, evaporate on the water-bath to dryness, and extract the residue with several portions of chloroform. This leaves undissolved any sugar, glycerin, or tannin. Filter the chloroform solution through dry paper, and evaporate the filtrate to dryness. If the residue is nearly white, it may be tested for alkaloids, as explained in paragraphs III. to V.; if it is still dark-colored and impure, treat it with water containing a few drops of sulphuric acid, filter, if necessary, and make the filtrate alkaline with a slight excess of ammonia. Shake this alkaline liquid with two or more considerable portions of chloroform, filter through *wet paper*, wash the chloroform in the filter with several portions of cold water, then filter it through *dry paper* into an evaporating dish, and expel the chloroform by a gentle heat. This residue can hardly fail to be pure enough to be tested for alkaloids. If searching for *morphia*, substitute amylic alcohol for chloroform.

II. *Separation from Powders and Dry Mixtures.*

a. If the drug contains much *tannic acid*, mix it with its weight of litharge (yellow oxide of lead, PbO), add water to form a paste, evaporate nearly to dryness on the water-bath, extract with several portions of hot, stronger alcohol, filter, evaporate the alcoholic liquid to dryness, and proceed as in I. This is a good method for the ex-

traction of caffeina from tea, coffee, guarana, maté or Paraguay tea, and "yaupon," or Ilex Cassine of South Carolina.

b. If the drug is quite *resinous*, extract it with dilute sulphuric acid, filter, and proceed as directed in I.

c. If the drug contains much *mucilaginous matter*, extract it with hot, stronger alcohol, to which has been added a very little sulphuric or acetic acid. Evaporate to expel the alcohol from the filtered liquid, add water, filter, if necessary, from any precipitated resinous matters, and then proceed as in I.

What has been given will cover those cases most liable to occur. It may be necessary to repeat some operations, in order that a more pure residue of alkaloid may be obtained. Having isolated the alkaloid, the next thing to be done is to find its solubilities.

III. *Solubilities.**

a. In *water* most alkaloids are very sparingly soluble, some are practically insoluble. Caffeina, conia, and nicotia are pretty freely soluble.

b. In *acidulated water* nearly all alkaloids are freely soluble; exceptions are emetia, which is precipitated by nitric acid, and berberina, by most mineral acids.

c. In *alkaline water* the alkaloids show marked differences in their solubilities. Some are soluble in ammoniacal liquids, some in liquids containing potassic hydrate, some in both, and some in neither. The indications afforded by these tests of solubility in alkalies are very valuable, as they serve to bring the suspected alkaloids into smaller groups.

d. In *alcohol* nearly all alkaloids are freely soluble. Strychnia is almost insoluble in absolute alcohol, and in alcohol of 23 per cent. sp. gr. .970 (NEW REM., January, 1879, p. 11). Nearly all salts of alkaloids with mineral acids are readily soluble in alcohol. By converting to sulphates, then adding excess of sodic or potassic carbonate, evaporating to dryness, and extracting with strong alcohol, alkaloids may be separated from most inorganic salts; this separation is based on the fact that the sulphates and carbonates of inorganic bases (except ammonium) are insoluble in strong alcohol.

e. Chloroform dissolves all the common alkaloids except morphia, and is the best solvent to effect their separation from sugar, glycerin, and tannin. It can be readily separated from water by pouring the mixture into a filter previously well wetted with water.

f. Ether, benzole, petroleum ether (the "deodorized benzine" of the trade), and *amylic alcohol* ("purified fusel oil") are very useful in separating alkaloids one from another. Squibb's stronger ether is the purest which the writer has found. None of the solvents used in analysis should leave any residue when evaporated on the water-bath. Amylic alcohol should be entirely volatilized by prolonged heating in an open dish upon the water-bath.

It is possible to tell very closely what an alkaloid is from its solubilities alone. Very careful attention should be given to the determination of solubility, and full notes should be taken at the time.

g. The action of solvents on acid (sulphuric) solutions is another means of separating and identifying alkaloids. Chloroform will remove from acid solutions those alkaloids which do not form stable salts with sulphuric acid. The two principal alkaloids of this class are caffeina and narcotina.

h. Solvents not miscible with water remove from alkaline water-solutions all alkaloids soluble in the solvents employed. Chloroform removes all common alkaloids except morphia; ether, benzole, etc., remove a smaller number.

IV. *Reactions with General Reagents.*

Having purified and isolated the alkaloid, as explained in I. and II., and found its deportment with solvents, as in III., make a solution in water with a little sulphuric acid, and test different portions with a few drops of each of the following reagents:

1. *Potassic mercuric iodide:* made by dissolving in water, to make a litre, 13.546 grams of mercuric chloride and 49.800 grams of potassic iodide. This solution ("Mayer's Solution") precipitates all common alkaloids except caffeina. (See U. S. Disp., 14th Ed., p. 1.679.)

2. *Picric Acid.* One part of acid to twenty of alcohol. Of the common alkaloids, aconitia, atropia, caffeina, and morphia are not precipitated from dilute (sulphuric) solutions.

3. *Tannic Acid.* Most alkaloids are precipitated by tannic acid. These precipitates have varying solubilities in acids, which serve to distinguish them.

4. *Iodine in Potassic Iodide.* The Liquor Iodinii Compositus of the U. S. P. is what is needed. If quinia is supposed to be present, use simple tincture of iodine (NEW REMEDIES, Feb. 1878, p. 57).

These four reagents are valuable in distinguishing alkaloids; if convenient, use also platinic chloride, gold chloride, and phosphomolybdic acid.

A failure to obtain a precipitate in dilute sulphuric acid solutions with any of the above-named general reagents is strong evidence that none of the common alkaloids are present. The reagents should be added only in small amounts, as some precipitates are soluble in excess.

V. *Direct Tests.*

From the solubility of the alkaloid and the deportment of its acidulated solution with general reagents, the analyst can say with certainty what alkaloids are not present. At the same time, he can judge what others, of a small number, may possibly be present, and he can apply appropriate distinctive reactions. If the amount of residue is small, dissolve it in alcohol, and evaporate small portions in five or six different dishes. Each residue may then be tested by a different reagent. The reagents most used are concentrated sulphuric, nitric, hydrochloric, and phosphoric acids, cold, and warmed on the water-bath; mixtures of sulphuric with much or little nitric acid or potassic nitrate; sulphuric acid, followed by a small crystal of potassic bichromate or manganese dioxide—the strychnia test; sulphuric and molybdic acids; chlorine or nitric acid, followed by ammonia-test for quinia, quinidia, or caffeina; iodic acid with carbon disulphide—a morphia test. Other special reagents are mentioned in various books. The ones named above give chiefly color reactions. It must be borne in mind that many of these special tests are subject to fallacies, and that it is seldom safe to base an opinion upon evidence derived from them alone. If, however, solubilities, general reagents, and special reagents all point to one alkaloid, it is pretty safe to assume it present.

It is hoped that what has been given may serve to indicate the general methods of isolating and testing alkaloids. It is impossible to give any one process applicable to all cases, or to recite in detail the special tests. For fuller particulars, the student should consult all available text-books, and supplement the statements there found by careful experimentation. An excellent plan is to make a mixture of two or more alkaloids, and separate them, or extract the alkaloids from such drugs as cinchona barks, belladonna leaves, or opium. The books most useful in my own practice are "Prescott's Proximate Organic Analysis," "Attfield's Chemistry," the "U. S. Dispensatory," and "Watt's Dictionary." Dragendorff's very complete scheme for the separation of alkaloids may be found translated in the *American Chemist*, Vol. VI., p. 378, April, 1878. The Stas-Otto scheme (*American Chemist*, IV., p. 172, Nov., 1873), so widely published, is not as good.

* See Prescott's Prox. Org. Anal., pp. 125–129.

CORRECTION.

In my paper on "The Volumetric Estimation of Sugars by Permanganate" two mistakes occur. On page 125, eleventh line from the bottom, also on page 126, tenth line from the bottom, insert 1.138+ for ".8783+.

NOTES, QUERIES AND ANSWERS.

[Under this heading we shall, to the best of our ability, endeavor to answer such questions addressed to us as come within the scope of this journal, provided they are accompanied by the name and address of the writer. Answers to queries received after the 5th of the month will lie over until the next issue. Unless special instructions to the contrary accompany the query, the initials of the correspondent will be quoted at the head of each answer.

No. 535.—**Persimmon Beer** (J. W. B., Charleston, S C.).

Porcher gives the following formula: Gather the persimmons perfectly ripe and free from any roughness. Work them into large loaves with bran enough to make them consistent; bake them so thoroughly that the cake may be brown and dry throughout, but not burned. They are then fit for use. But if you keep them any time it will be necessary to dry them frequently in an oven moderately warm. Of these loaves broken into a coarse powder, take 8 bushels. Pour on them 40 galls. of cold water, and after 2 or 3 days draw it off; boil it as other beer, adding a little hops. This makes a very strong beer.

Another formula, likewise quoted by Porcher, and taken from the *Southern Cultivator*, is this: Sweet ripe persimmons, mashed and strained, 1 bushel, wheat bran ½ bushel. Mix well together and bake in loaves of convenient size; break them into a clean barrel, and add 12 gall. of water and 2 or 3 ounces of hops. Keep the barrel in a *warm* room. As soon as fermentation subsides, bottle off the beer, using good long corks, and place the bottles in a low temperature, when it will keep and improve for 12 months. This beer, when properly made, in a warm room, is an exquisitely delightful beverage, containing no alcohol, and is to the connoisseur of temperate taste not inferior to the fermented juice of the vine.

No. 536.—**Alcoholic Strength of Liquors** (B. & Co., Chicago, Ill.).

H. Grouven (Vortr. über Agriculturchemie, I., 425) gives the following average percentages of alcohol, as contained in the ordinary liquors:

	Vol. %	Weight %
Scotch Whiskey	50.3	42.8
Irish "	49.9	42.3
American " (old)	60.0	52.2
English "	49.4	41.9
French Cognac (Brandy)	55.0	47.3
Rum	49.7	42.2
Gin	47.8	40.3
German "Schnaps"	45.0	37.9
Russian "Dobry Wutky"	62.0	54 2

The percentage of alcohol in American whiskey is usually lower than that given above.

No. 537.—**Barbatimas Bark** (R. McE., New Orleans, La.).

We have never heard of any of this bark being in our market. The name is applied, in Brazil, to different astringent barks derived from *Mimosa*, *Acacia*, or *Inga*, nat. ord. Leguminosæ (Mimoseæ). Martius mentions the following:

Acacia Angico Mart.; *Acacia Jurema* Mart.; *Pithecolobium Avaremotemo* Mart. (*Inga Av.* Endl.); *Stryphnodendron Barbatimao* Mart. (*Inga Barb.* Endl.).

The species' names here quoted are at the same time the native names in Brazil. The wood of these trees is very hard, reddish, with irregular concentric veins, and is found in commerce occasionally. It is used in fancy cabinet-work and known as "angica" or "inzica." All of them have a very astringent and bitter taste. They are employed in Brazil for the "radical cure" of hernia, according to Martius, and Guibourt (*Hist. Nat. des Drogues Simpl.*, III., 331).

No. 538.—**Hair Invigorators** (T., New York).

This correspondent requests us to advise him of a reliable and harmless method for increasing and hastening the growth of hair, particularly of the beard. He states that he asks in the name of a western friend, a young physician, "who finds it detrimental to his practice to be beardless."

The very best agent in producing the desired hirsute appendage is *time* and *patience*. Unless there is some organic deficiency of hair-cells, as it indeed quite often happens, the beard will make its appearance in due time. Its growth may be indeed somewhat hastened by *gently* stimulating applications combined with frequent shaving. Bay rum, either alone or mixed with a little glycerin, is very commonly used and no doubt of some benefit. The ubiquitous vaseline has also been highly recommended for this purpose, and we have no doubt that the friend of our correspondent, if he assiduously applies either of the above, will in *a year or two* be able to report success.

No. 539.—**Resin of Jalap** ("Inquirer").

The commercial or officinal resin of jalap consists mainly of two different resins, one of which is soluble in ether, while the other is insoluble.

The portion insoluble in ether, which amounts to about 95–88% of the resin, is known as *convolvulin*. This is the real purgative principle of jalap. The other portion, which is soluble in ether, amounts to 5–12%, and represents a fatty substance of an acid reaction, which is entirely devoid of purgative properties.

The term *jalapin*, which should, by right, have been chosen to designate the active principle of jalap (or *convolvulin*), has very improperly been given to a resin obtained from other sources, namely, from Orizaba root or "Male Jalap" (from *Ipomœa Orizabensis* Pelletan), also from Scammony.

Resin of jalap is quite expensive and therefore often subject to adulterations. Resin of aloe, of guaiac, of agaric, and jalapin are mentioned as such. Hager (*Pharm. Praxis*) gives the following directions for testing it: Introduce 1 gm. of the resin into a wide test-tube, add 10 gm. of chloroform (*free from alcohol*), and heat to boiling. This causes the resin to soften and to cake together. By means of a long knitting needle the mass is stirred about in the chloroform, so as to promote the solvent action of the latter. The chloroform is then poured into a tared capsule, the resin again treated in the same manner, and the liquid added to that in the capsule, which is then warmed, until the chloroform is evaporated and a dry mass remains. Should the latter amount to more than 7% (that is, should it weigh more than 0.07 gm.), the original resin of jalap may contain either common resin, or resin of agaric, guaiac, myrrh, or jalapin, for all these are soluble in chloroform. If the latter contains only 0.5% of alcohol, it will dissolve as much as 8% of true resin of jalap.

No. 540.—**Quinquinia** (W., Shelbyville, Ill.).

This substance, which has been placed upon the market by Messrs. Charles T. White & Co., of New York, is a product obtained in the manufacture of quinia, and represents the natural and secondary alkaloids, excepting the larger part of quinia, which has been separated by crystallization. The manufacturers, however, state that it still contains at least 15% of quinia. As it would be too costly and circumstantial to separate this last fraction of quinia from the product, and as it is now believed that the other alkaloids of cinchona are nearly or altogether as valuable for most purposes as quinia, the manufacturers concluded to offer the residue without subjecting it to further processes of separation which would enhance the price.

Of course, this preparation is analogous to others prepared from residues of the crystallization of cinchona alkaloids (among them the one you mention), but there is

still a difference depending on the fact that various manufacturers use various cinchona barks, and that the proportion of the single constituents of such a compound is exceedingly variable. But, as we had occasion to state in former articles, this difference is entirely immaterial so far as effect is concerned.

No. 541.—**Arabate of Quinia** (C., New York).

We believe this substance, which has occasionally been used by practitioners in this city, to be merely a mixture of quinia with arabin. The latter substance may be made by precipitating a clear mucilage of gum arabic, acidulated with a mineral acid, by means of alcohol. The precipitate should be redissolved in pure water, and again precipitated, until it becomes light-colored; it may then be mixed with quinia. It is isomeric with cane-sugar, but possesses no practical superiority over the best gum arabic except its paler color.

No. 542.—**Hypodermic Injection of Quinia** (H. H McC., Jacksboro, Texas).

Lente's Solution of Quinine is much used here, and acts very well:

Sulphate of quinia	80 grs.
Water	1 fl. ʒ
Dil. sulphur. acid	q. s.

Heat to boiling, and add:

Carbolic acid	5 gr.

Kinate of quinia and lactate of quinia, both of which may be made extempore, likewise are good salts for hypodermic use. More in our next.

No. 543.—**Dover's Syrup** (R., Buffalo, N. Y.).

We know of no such preparation. A "Dover's Tincture" has been occasionally used, which, however, is an unnecessary preparation. As a matter of information, we will state that the formula which was published for the latter directed to exhaust 128 grains each of powdered opium and powdered ipecac with enough dilute alcohol to obtain 1 pint of percolate. Each fluid-drachm of this tincture is equivalent to 10 grains of Dover's powder.

You state that a druggist in your city has "copyrighted" the name "Syrup of Dover's Powder," and ask whether this could by rights be "copyrighted."

It is our opinion that such a combination of words, which may be used accidentally by any one in describing such a mixture, should not receive the protection of a trademark. At the same time, we are well aware that our Patent Office in Washington has, already years ago, afforded protection to even more ordinary and commonly-used words, so that it has become difficult to refuse protection except in clearly unentitled cases.

No. 544.—**Emulsion of Cod-Liver Oil** (B., Patterson, N. J.).

The best emulsion which we know of is the following, which we have published several times already:

Cod-liver oil	28 parts (by weight).
Glyconin	8 "

Mix and flavor to taste.

The *glyconin* is made by beating or whipping 4 parts by weight of fresh yolk of egg in the usual manner, pouring the liquid yolk into a bottle, adding 5 parts by weight of glycerin, and shaking well together. Four parts of cod-liver oil require at least 1 part of glyconin to form a stable emulsion.

A somewhat more elegant emulsion is the following:

Cod-liver oil	28 parts (by weight).
Glyconin	9 "
Arom. spts. of ammonia	1 "
Sherry wine	20 "
Essence of bitter almond	2 "

Mix. The essence of bitter almonds is made by mixing 1 part of oil of bitter almonds with 64 parts of alcohol. This and the preceding emulsion are made by putting the glyconin in a mortar and adding the oil in very small quantities at a time, triturating the mixture actively and constantly. The better it is triturated, particularly in the beginning, the better will it hold. Then add the other ingredients slowly in the order in which they are mentioned.

If extract of malt is admissible, and the physician should find its employment indicated, a very nice emulsion may be made by triturating together equal parts of it and of cod-liver oil, which will form a stable emulsion.

No. 545.—**Dark-colored Paregoric** (F., New York).

This is colored with santal or other coloring agents by some druggists, for family trade only, as the tincture previous to 1840, when licorice was one of the constituents, had a much darker color, and people had become used to its appearance. For prescriptions, none but the officinal light golden-brown tincture should be used.

No. 546.—**Tully's Mistura Ferri et Conii.**

One of our correspondents has favored us with the following note, which is no doubt a correct solution of the difficulty we encountered in Query 523 of our April No.:

"I noticed among your queries of the April number (p. 123) Dr. King's Recipe for Mistura Ferri et Conii and an inquiry for 'Tilney's.'" The receipt used here at New Haven, is Tully's, known locally only I think, and I thought there might be some mistake in the name. The formula is:

Ferri subcarbonatis	℥ 5
Extr. conii	℥ 2½
Tinct. cinnamomi co.,	
Tinct. tolutanæ	āā ʒ 2
Ol. cinnamomi (cassiæ)	gtt. 72
Ol. gaultheriæ	gtt. 80
Sacchari albi	℥ 32
Aquæ puræ	q. s. ad O 4

Mix thoroughly, and it will be at once ready for use."

M. FRANCIS.

No. 547.—**Rennet Apple** (C., New York).

This is a species of apple (*Pyrus Malus*, L.), which is technically known as pomum renettium (plur., poma renettia), and belongs to the acidulous apples. The latter class of apples are directed by some pharmacopœias to be used as a source of malic acid, in the preparation of iron-compounds, as the tinctura ferri pomata and the extractum ferri pomatum.

The word *rennet* (French, *reinette* or *rainette*) is a corruption of the French *raine* "frog," from the Latin *rana*. The name was applied to the apple probably on account of its color and of its speckled appearance.

No. 548.—**Quick Blister for Horses** (W., Half Moon Bay, Cal.).

One of the strongest and quickest blisters for cattle is said to be *White's Blister*. This consists of:

Strong mercurial ointment	4 oz.
Oil of origanum	⅛ oz.
Powd. euphorbium	⅜ oz.
Powd. cantharides	½ oz. M.

No. 549.—**To Preserve Oranges and Lemons in Warm Weather** (W., Greely, Iowa).

Examine the fruits and reject any which are in the slightest degree bruised or chafed. Wipe them dry, carefully, and then pack them in boxes or barrels, in *dry* saw dust (which is made from wood as free as possible from resin), so that they do not touch each other. Keep them in a cool, dark place. They may also be buried in dry sand, but in this case should first be enveloped in fine tissue-paper.

If it is not of importance to preserve their external *looks*, they may also first be dipped into melted paraffin, which thoroughly protects them from change. Of course, they would not be generally salable in this condition, but might be preserved in this way for home use, or for use in large hospitals, etc.

The Druggists' Advertiser has ceased its circulation. The former editor, Mr. Wm. G. Mortimer, informs us that he has accepted the management of the druggists' trade in the house of H. K. and F. B. Thurber & Co., New York.

NEW PATENTS.

[The following list is compiled from official sources, especially for NEW REMEDIES, *by S. H. Wales & Son, Solicitors of Patents, 10 Spruce St., New York, who will furnish gratis to subscribers any information relating to this department.*

TRADE MARKS REGISTERED DURING JANUARY, 1879.

Medicinal Compounds.

6,924. Samuel Gerry & Co., Providence, R. I. The fanciful word "Sapanule."

6,935. Foster, Milburn & Co., Buffalo, N. Y. Two heads or busts of a man and woman, both cadaverous, lean and shabby, the man outside, the woman back of him, both in profile. To the right are two busts of a jolly or full-faced man and a woman, the latter in profile and back of the man, both well dressed and healthy-looking.

6,949. Keasbey & Mattison, Philadelphia, Pa. The fanciful word "Dextro."

6,955. Daniel J. Duffy, St. Louis, Mo. The sign or symbol of a ring or band having an arrow passing horizontally through the centre of it.

6,966. H. C. Snitcher, Wilmington, Del. The word-symbol "Royal," and a picture of a pair of scales, a mortar, and a pair of anatomical jars, used in connection with the words, "The Royal Medicine Company."

6,967. Charles T. White, New York, N. Y. The word-symbol "Quinquinia."

6,973. Scott & Bowne, New York, N. Y. The arbitrarily selected letters "P. P. P." in connection with a triangular figure.

Cosmetics and Soap.

6,938. Charles F. Southwick, Providence, R. I. The Chinese head and the Chinese letters or characters shown.

6,939. F. H. Siddall, Philadelphia, Pa. The figure of a man kicking a wash-boiler, arranged as shown.

6,945. William E. Jervey, New York, N. Y. The figure of a human head (male or female) having at least one conspicuous portion thereof devoid or nearly devoid of hair.

6,960. Lantz Bros. & Co., New York, N. Y. The arbitrarily selected word-symbol "Marseilles."

6,970. James S. Kirk & Co., Chicago, Ill. The arbitrarily selected word "Coronet."

6,971. James S. Kirk & Co., Chicago, Ill. The arbitrarily selected word "Ceylon."

Paints, Oils and Chemicals.

6,964. Olney Brothers, Providence, R. I. The representation of a spur-gear or cog-wheel and the arbitrarily selected word "German."

6,982. William Gossage & Sons, Widnes and Liverpool, England. The monogram "G. & S." and the words, "Widnes," "Lancashire."

6,985. James McLain, Baltimore, Md. The word-symbol "Old Ironside," and the pictorial illustration of Andrew Jackson.

Carbonated Beverages.

6,940. Sea Island Company, Boston, Mass. The arbitrarily selected words "Aqua Dulcamara."

6,968. L. Somborn & Co., New York, N. Y. The oval band, crown, and shield, as shown.

LABELS GRANTED DURING JANUARY.

1,823. "Tasteless Castor Oil Emulsion." Adolph Richter, Baltimore, Md.

1,824. "Compound Syrup of Tar, Wild Cherry, and Horehound." Charles O. Rano, Buffalo, N. Y.

1,825. "Scott & Bowne's Palatable Castor Oil in an Emulsion." Scott & Bowne, New York, N. Y.

1,828. "Dr. Yellowstone's Herbs of Wonder." William A. J. Fiss, Philadelphia, Pa.

1,829. "Mrs. Winslow's Hair Restorer." L. Gerhard, Philadelphia, Pa.

1,830. "Dr. Von Sender's Zusammengesetzter Fenchel-Honig Extrakt." Hinrichs Bros., Washington, D. C.

1,831. "Oleaginous Natural Hypophosphite." John M. Hunter, New York, N. Y.

1,832. "Hygienic Phosphatic Pomade (for external use)." John M. Hunter, New York, N. Y.

1,833. "Peters's Rheumatic Elixir." C. W. Peters, Fort Madison, Iowa.

1,834. "Pearls." Pearl Manufacturing Co., New York, N. Y.

1,835. "Pearl Injector." Pearl Manufacturing Co., New York, N. Y.

1,836. "George's Pile and Gravel Pill." Enoch Evans and Thomas H. Jones, Hyde Park, Pa.

1,837. "Lelia Pith for the Complexion." Hegeman & Co., New York, N. Y.

1,838. "Pain-Killing Liniment." Jonathan Johnson, Lawrence, Mass.

1,844. "Far-Licorice for Bronchitis, Coughs, Colds, etc." Wm. E. Armstrong, New York, N. Y.

1,846. McGilfrey's Great Neuralgia Cure." McGilfrey's & Dings, Bath-on-the-Hudson, N. Y.

1,848. "Self-Speaking Liniment." S. K. Wickham & Co., Oak Grove, Va.

PATENTS GRANTED DURING JANUARY.

January 7th.

Bottle, incased, E. A. Heath.....211,092
Fibres, separating animal from vegetable, G. M. 2d, and A. L. Rice.....211,109
Knee-protector, T. Masac.....211,171
Urinal shield, F. Adee.....211,078

January 14th.

Abdominal supporter, galvanic, G. W. Carpender.211,319
Charcoal and pyroligneous acid, plant and process for the manufacture of, H. L. Brooke.....211,376
Dental impression-cup, M. E. Toomey.....211,438
Funnel, measuring, G. B. Smith.....211,352

January 21st.

Bottle, G. B. Sanborn.....211,526
Bottle-stopper and stopper-fastener, W. Silvester..211,529
Bottle-stopper fastener, T. B. Atterbury.....211,490
Liniment, N. Sailvail.....211,477
Truss and abdominal support, C. J. Wolff.....211,611

January 28th.

Colors derived from toluidine and xylidine, Z. Roussin and A. F. Poirrier.....211,671
Dental plugger, W. H. Dibble.....211,652
Fibrous material, apparatus for treating, G. M. 2d and A. L. Rice.....211,788
Filtering apparatus, A. H. Peterson.....211,640
Oils, paints, etc., liquid drier for, A. W. Pratt...211,782
Oils, purification of paraffin, T. Marrin.....211,762
Pill-machine, J. Hill.....211,733
Pills, drying-closet for, A. F. W. Neynaber.....211,770

Orange and Lemon Harvest of Chios.—The large island of Chios, in the Grecian Archipelago, annually produces about twenty-five millions of oranges, and thirty-five millions of lemons. About two-thirds of this quantity are exported to Russia, and the remainder to ports in Asia Minor. Whenever the demand for these fruits in the Sicilian ports of Messina and Palermo exceeds the production, supplies are drawn from Chios for export to foreign countries. The industry is only about fifteen years old, but already thousands of the inhabitants derive from it their means of sustenance.

PRESCRIPTIONS AND FORMULÆ.

Palatable Chloral Mixture.—

℞ Chloral hydrate..... ʒ ss.
Chloroform water..... ʒ ij.
Syrup of orange-peel or tolu .... ʒ i. ad ij.
Tinct. of ginger.... .....gtt. vi. ad xij.
Water, to make.....fl. ʒ iss.

Chloroform water is made by dissolving a drachm of chloroform in one quart of water, and forms a useful *addendum* for many prescriptions, as it serves, not only to cover the taste of a drug, but intensifies its action in the case of an anodyne or hypnotic.

Mr. Peter Squire says that peppermint water covers the taste of chloral better than orange-flower water, bitter almonds, or ginger. If peppermint is objectionable, syrup of tolu is next best.—*Monthly Magazine.*

Carbolate of Iodine.—The following formula is furnished by an agent of the "patent pocket inhaler," according to the statement of a correspondent in the *Pharm. Jour.*

Carbolic acid	45 parts.
Camphor	10 "
Acetic acid	8 "
Alcohol	10 "
Iodine	1 "
Water	25 "
Oil of cassia	1 "

Dr. C. F. Holtz's original formula, for use as an inhalation in diphtheria, is:

Cryst. carbolic acid	1 fluid-drachm.
Alcohol	1 "
Water	5 "
Tinct. of iodine	4 "

Compressed Yeast.—This is prepared by causing the fermentation-cells, after they have converted the saccharine matter in the mash into alcohol and carbonic acid, to rise to the surface, washing them thoroughly, and finally pressing. The yield of a good, active product is accompanied by a slight loss in alcohol on distilling the mash, as the yeast ought to be removed before the alcoholic fermentation is completely finished. But this loss is insignificant compared with the value of the yeast. One kilo gram of the latter costs less than five cents to the manufacturer. Any mixture of grain may be taken in its preparation.

To Clean Rusty Steel.—Steel which has been rusted can be cleaned by brushing with a paste made of ½ oz. of cyanide of potassium, ½ oz. of castile soap, 1 oz. of whiting, and water sufficient to form a paste. The steel should first be washed with a solution of ½ oz. of cyanide of potassium in 2 oz. of water. To preserve steel from rusting, a good method is to paint it with melted caoutchouc, to which some oil has been added.

Syrup of Croton Chloral (Butyl-Chloral).—The *Pharm. Journal and Trans.* (Jan. 18th, 1879), under the heading of "Notes and Queries," contains the following two formulæ:

1. Croton Chloral hydrate.....16 gr.
Tinct. of fresh orange peel.....1 fl. ʒ
Dissolve and add
Syrup.....7 fl. ʒ. (P. Boa).

2. Dissolve the croton chloral in water in an evaporating dish, employing sufficient heat to do so, and add sugar to make a syrup, containing 2 grs. of the chloral in 1 fl. ʒ. Although not flavored, children, for whom it has been prescribed in whooping cough with very great benefit, do not object to the taste. Of course, any flavoring agent could be added, if deemed advisable.—*J. S. Hicks.*

The Olive Crop.—Advices from Bari (Naples), state that the last olive crop is so abundant that the dealers say a similar one has never been seen either for quantity or quality.

ITEMS.

College of Pharmacy of the City of New York.—At the annual meeting of the College, held on March 20th, the following officers were elected to serve for the ensuing year: *President*, Ewen McIntyre; *Vice-Presidents*, G. C. Close, H. J. Menninger, M. L. M. Peixotto; *Treasurer*, Theobald Frohwein; *Secretary*, Henry A. Cassebeer, Jr.; *Trustees*, Ad. Tscheppe, Starr H. Ambler, Gust. Balser, Aug. Weissmann, for three years; Paul Balluff, Chas. Rice, David Hays, W. M. Olliffe, for two years; W. Neergaard, P. Fr. Lehlbach, E. P. Nichols, G. Ramsperger, for one year. At this meeting and at the meeting of the Board of Trustees held on April 3d, the following committees were elected and appointed: *Property Committee*, W. M. Olliffe, Aug. Weissmann, T. Louis, D. C. Robbins, J. W. Shedden; *Library Committee*, Chas. Rice, Gust. Balser, Ad. Tscheppe; *Committee on Reference*, G. C. Close, W. Neergaard, David Hays; *Lecture Committee*, G. Ramsperger, David Hays, A. Weissmann, E. P. Nichols, P. Fr. Lehlbach; *Committee for semi-centennial Celebration*, P. W. Bedford, M. L. M. Peixotto, G. D. Coggeshall; *Delegates to the Annual Meeting of the American Pharmaceutical Association*, H. J. Menninger, Chas. Rice, Starr H. Ambler, P. W. Bedford, Fr. Hoffmann; *Curators*, G. Balser, Starr H. Ambler, Chas. Rice; *Examining Committee*, H. J. Menninger, Paul Balluff, Chas. Rice, M. L. M. Peixotto, Ad. Tscheppe.

At the forty-ninth annual commencement of this College, which took place on the 18th of March, 65 gentlemen, whose names were published in our last number, received their diplomas, 17 candidates having failed to pass their examination. The gold, silver, and bronze medals, offered by the Alumni Association of the College, for those who passed the best general examination, were awarded to Chas. H. May, George W. Freygang, and Rudolph C. Werner, with respectively 95¼ per cent, 94¼ per cent, and 92⅝ per cent. The "roll of honor" (the ten succeeding the "medalists") is as follows: Albert F. Brugman, John Oehler, Hilon H. Sawyer, Percival Brewer, Frederick Cassebeer, Theobald R. Frohwein, Smith Bartlett, George Blair Frazer, Bernard F. Callaghan, William W. Fowler, the lowest rating being 86⅛ per cent. A special prize of a microscope, a gift of an unknown friend, was presented to John Oehler, as having the highest record in botany. The laboratory class presented a crayon portrait of Professor Charles Froebel. The address by Judge Henry E. Howland was in his absence delivered by Mr. Chas. F. Miller. Two hundred and five students have attended the lectures, one hundred and thirty-six juniors and one hundred and sixteen seniors.

Philadelphia College of Pharmacy.—The *Zeta Phi* Society of the Philadelphia College of Pharmacy held its twenty-fifth anniversary on the 11th of March, at the hall of the College during which the "Robert Bridges Scholarship" was presented to the College, and addresses were made by Messrs. W. C. Bakes, M. M. Murray, L. C. Hopp, W. J. Jenks, J. L. Lemberger, and Professors Maisch, Remington and Ebert. The Society was reorganized under the title of *Zeta Phi Alpha*, and the following officers were elected: *President*, Joseph L. Lemberger, of Lebanon, '54; *First Vice-President*, Andrew J. Ditman, New York; *Second Vice-President*, Howard B. French, '71; *Secretary*, F. Marion Murray, '76; *Treasurer*, Charles W. Hancock, '57; *Chaplain*, J. Bloomfield Welkerite, Newark, N. J., '57; *Executive Committee*, William E. Krewson, '69; Thomas H. Potts, '71; Thomas S. Wiegand, '44; Charles J. Biddle, '71; Charles L. Eberle, William McIntyre, William C. Bakes, '55; W. W. Moorhead, '69; Albert P. Brown.

On the evening of March 14th, the College held its fifty-eighth annual commencement, at which degrees were

conferred upon a large class of graduates from various localities, as follows:

From Pennsylvania	64	From Ohio	4
New Jersey	20	Dist. of Columbia	1
New York	2	Georgia	1
Delaware	5	Germany	4
South Carolina	2	Kentucky	1
Texas	2	Nebraska	1
Indiana	1	Virginia	2
Maryland	2	Illinois	3
Wisconsin	2		
Michigan	1		118

Professor Maisch then presented to Mr. Joseph Brakeley the Mackinall gold medal for proficiency in chemistry after which Prof. Jos. P. Remington, Ph.G., delivered the valedictory address. Professor Remington referred to Dr. Bridges, who has resigned his professorship, after having been connected with the College nearly forty years, and has been succeeded by Professor Sadtler.

Mr. Vansant, on behalf of the graduating class, presented to Dr. Bridges a set of handsomely framed and engrossed resolutions, expressing their regret at his leaving, their profound respect for him as a chemist, and their esteem for him as a friend.

Dr. Bridges being absent, the resolutions were received, in a few remarks, by Mr. Charles Bullock.

A handsome silver salver, pitcher, and goblets were presented on behalf of the class to Professor Maisch.

George B. Wood, M.D.—This eminent physician and medical author died early on Sunday morning, March 30th, at his residence at 1117 Arch street, in Philadelphia, in the eighty-second year of his age. He had been confined to his house for the past four years, and had not been able to leave his bed for the last two years.

Dr. Wood was born in Greenwich, Cumberland Co., New Jersey, on the thirteenth of March, 1797. His parents were Friends, and his great-grandfather, Richard Wood, was a county judge in 1748. The education of Dr. Wood was begun in the city of New York, but was completed at the University of Pennsylvania, where he graduated in the year 1815. Immediately after obtaining the degree of A.B., he entered the office of Dr. Joseph Parrish, of Philadelphia, and took the degree of M.D., in the medical department of the University of Pennsylvania, in the year 1818. He delivered, in 1820, a course of lectures on chemistry, and in 1822 was appointed to the chair of chemistry in the Philadelphia College of Pharmacy. This position he held until the year 1831, when he was made Professor of materia medica in the same college. On the 6th of November, 1835, he was elected to the chair of materia medica and pharmacy in the medical department of the University of Pennsylvania. When Dr. Nathaniel Chapman resigned the chair of theory and practice in 1850, Dr. Wood was elected to fill his place. In 1860 he resigned the professorship of the theory and practice of medicine, and was made emeritus, being succeeded in the active duties of the chair by old Dr. William Pepper. In 1869 he was elected a trustee of the University of Pennsylvania. Dr. Wood was attending physician to the Pennsylvania Hospital from 1835 to 1859. In this latter year he was elected president of the American Philosophical Society, which position, together with that of the presidency of the Philadelphia College of Physicians, he held at the time of his death.

His election to the chair of materia medica in the University, in 1835, was productive of new and fresh interest in that branch, in consequence of its being made a demonstrative one in each science pertaining to it. So too, in his hands, the chair of theory and practice became as eminently demonstrative, for he was a very elegant and instructive lecturer. He richly endowed it with all the materials for teaching, and into every department of this varied subject introduced appropriate illustrations in the form of drawings of the pathological lesions of the organs, together with physical apparatus, and casts and models of the various forms of disease. In addition to the creation of an admirable cabinet of drawings and specimens illustrative of the materia medica, Dr. Wood erected a spacious greenhouse, in connection with a garden, and stocked them with many varieties of rare tropical and exotic plants, which he exhibited as illustrations of the subjects treated in his lectures. One of his bequests to the school was a very extensive collection of dried medicinal plants.

Dr. Wood was the author of numerous and valuable books, chiefly relating to his profession, which still rank among medical classics. His first important work, the "Dispensatory of the United States" was written in conjunction with Franklin Bache, M.D., and the original edition was published in Philadelphia in 1833 (8vo, pp. 1073). This work at once stamped him as a man whose research and knowledge were of the highest order. The "Dispensatory" was thoroughly exhaustive in its description of the many medical agents peculiar to American

THE LATE PROFESSOR GEORGE B. WOOD M.D., LL.D.

and foreign therapeutics, indicating minutely their various properties and effects. It went through fourteen editions, the last being in 1877 (8vo, pp. 1880). Of it some 160,000 copies have been sold up to the present day. Dr. Wood wrote fully two-thirds of this work. In addition to this book he prepared, conjointly with Dr. Bache, in 1830, a "Pharmacopœia," which was adopted, with slight alterations made under the superintendence of its authors, by the national convention of physicians assembled for that purpose, and which became the basis of the present U. S. Pharmacopœia.

In 1847 he published a "Treatise on the Practice of Medicine" (2 vols. 8vo). It ran through six editions, the last appearing in 1867. He also published, in 1856, a "Treatise on Therapeutics and Pharmacology," which had three editions, the last being issued in 1868 (2 vols. 8vo, pp. 1848), and a volume containing twelve lectures, six addresses, and two biographical memoirs, in 1859. The lectures and addresses were delivered chiefly before the medical classes of the University of Pennsylvania. He also wrote "The History of the Pennsylvania Hospital," "History of the University of Pennsylvania,"

"Biographical Memoir of Franklin Bache," etc. In 1872 these sketches, with the addition of the "History of Christianity in India," "History of the British Empire in India," "History of Girard College," and other papers, were collected in a volume, styled "Memoirs, Essays, and Addresses."

In 1865 Dr. Wood endowed an auxiliary Faculty of Medicine in the University of Pennsylvania, which was composed of five chairs, namely: *First*, Zoology and Comparative Anatomy. *Second*, Botany. *Third*, Mineralogy and Geology. *Fourth*, Hygiene. *Fifth*, Medical Jurisprudence and Toxicology. The incumbent of each chair is required to deliver during the months of April, May, and June, not less than thirty-four lectures, for which he receives $500 a year.

Although retired from active professional service for some sixteen years, the death of Dr. Geo. B. Wood removes from the head of the medical profession in Philadelphia the dignified successor in the long line of worthy names that have given that city its eminence among medical centres. When his stately presence was no longer seen among his younger confrères at the University, in the retirement of advancing years, his energy and interest were still given to the medical school that had been the field of his labors and triumphs. Much of his property is left by his will to the Medical Department and Hospital of the University of Pennsylvania.

We are indebted for the photograph, from which our portrait was taken, to the courtesy of Mr. F. Gutekunst, of 712 Arch st., Philadelphia.

Dr. Heinrich Gcissler, the inventor of the vaporimeter, the mercury air-pump, the Geissler-tubes, and various other useful apparatuses, died at Bonn on January 24th, in the 65th year of his age. He began life as a glass-blower, and after some years of wandering settled down as a glass-blower to the University of Bonn, where he won a world-wide reputation.

Franz Leopold Sonnenschein, Ph.D., Professor of Chemistry at the University of Berlin, died there on February 26th. He was born on August 13th, 1817, and was known as a careful investigator and eminent teacher of chemistry.

M. Francois Marie Dorvault, founder and director of the *Pharmacie Centrale de France*, died at Paris on February 16th, in the 65th year of his age. His name has become a household word, particularly among French pharmacists, through his excellent work entitled "L'Officine," a counterpart of our Dispensatories, which has passed through ten editions, and contains an immense amount of useful information. He was also the founder of the pharmaceutical journal "*L'Union Pharmaceutique*," and throughout his life was an assiduous defender and guardian of the interests of the profession. His death was due to a disease of the brain.

The Chemist and Druggist.—This well-known organ of the English drug-trade has issued a miniature copy of its January number, giving a fac-simile of its entire contents—advertisements and all, in 128 pages, including the index of the preceding volume. It is a curiosity, as showing what can be done by the process of photo-engraving, but it almost requires a magnifying glass to decipher the letter-press.

Trade-Mark Association.—An organization, styled the "United States Trade-mark Association," has been formed in New York, for the protection of the rights of owners of trade-marks. It will have agents at all prominent points in the United States, and will co-operate with associations in other countries having similar objects. Hon. Orestes Cleveland, of the Dixon Crucible Co., has been chosen president.

The Pharmaceutische Zeitung, published at *Bunzlau*, one of the most advanced and most widely circulated pharmaceutical journals, appears from Jan. 1st, 1879, in a much enlarged and improved form. It is published twice weekly and costs yearly 20 marks ($4.76). The editor is Mr. H. Mueller in Bunzlau.

Guaiacate of Lithium appears to be a new salt used by somebody in England, if we may judge from a query of a correspondent of the *Pharmaceutical Journal*, who asks for information on the subject. It must be a very costly substance, as Hadelich, in 1862, obtained only 1 part of guaiacic acid from 20,000 parts of guaiac resin.

The Manufacture of Glass in Pittsburg.—Pittsburg, Pennsylvania, produces more than half the glass made in the United States. Its factories number 73, with 690 pots, and give employment to 5,248 hands, whose wages approach $3,000,000 a year. The materials employed in the manufacture were, the past year, 12,110 tons soda ash, 48,340 tons of sand, 152,000 bushels of lime, 1,218 tons nitrate soda, 793,500 bushels of coke, 4,525,760 bushels of coal, 4,025 cords of wood, 6,055 tons of straw, 2,760 barrels of salt, 250 tons of pearl ash, 360 tons of lead, 150,000 fire brick, 2,955 tons of German clay. The packing boxes cost $484,250, and required 2,109 kegs of nails. 96 wagons and 130 horses were employed in hauling. The space occupied by the buildings is equal to 208 acres, and the capital in buildings, machinery, and grounds is, in round numbers, $3,500,000. The business produces about $7,000,000 a year.

PHARMACEUTICAL CALENDAR.—MAY.

N. B.—The officers of Societies, Colleges of Pharmacy, Pharm. Associations, etc., not quoted in this Calendar will oblige us by forwarding a schedule of their meetings and a list of officers.

Day of Week.	Day of Month.	Society Meetings.
Thursday	May 1.	New York Coll. Ph.—Trustees' Meet.
		Phila. Coll. Ph.—Alumni Asso.
		Mass. Coll. Ph.—Trustees' Meet.
		Mass. Coll. Phar.—Alumni Asso.
		Louisville Coll. Pharm.—Monthly Meet.
Tuesday	" 6.	Phila. Coll. Pharm.—Trustees' Meet.
		Pittburgh Coll. Pharm.—Trustees' Meet.
Thursday	" 8.	N. Y. Germ. Apoth. Society.—160 Third Ave.
		Phila. Coll. Pharm.—Alumni Asso. Social Meet.
		Newark Pharm. Asso.—5 P.M., Room 4, Library Building.
		Maryland Coll. Pharm.—Stated Meet.
		Louisville Coll. Pharm.—Directors' Meet.
Tuesday	" 13.	Chicago Coll. Pharm.—Trustees' Meet.
		St. Louis College Pharm.—Pharm. Meet.
Wednesday	" 14.	Cincinnati College Pharm.—Monthly Meet.
Tuesday	" 20.	Kings Co. Pharm. Asso.—120 Myrtle Ave., Brooklyn, N. Y.
		Phila. College Pharm.—Pharm. Meet.
		St. Louis Coll. Pharm.—Trustees' Meet. and Alumni Asso.
		Pittsburgh Coll. Pharm.—Pharm. Meet.
Wednesday	" 21.	New York State Pharm. Asso.—First meeting for organization; Utica, N. Y., Rooms of Common Council, 12 o'clock noon.
Tuesday	" 27.	Boston Drug. Asso.—Monthly Meet.

"NEW REMEDIES," an Illustrated Monthly Trade Journal.
New York, June, 1879.

PROFESSOR ROBERTS BARTHOLOW, OF CINCINNATI.